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Legislative History – Montana Session Law

Chapter: 158 Session L: 2019
Bill Number: SB 160

Checklist of Bill History

History and Final Status Sheet	☒
Introduced Bill	☒
Fiscal Note	☒
Third Reading Bill	☒
Final Version of Bill	☒

House

Committee: Business and Labor

Hearing Date(s): 03/15/2019

Committee Report: Concurred as amended

Senate

Committee: Business, Labor, and Economic Affairs

Hearing Date(s): 01/29/2019

Committee Report: Bill passed as amended

Conference Committee

Hearing Date(s):

Conference Committee Report:

Compiler Notes

Compiled by: Charlotty Herman
Date: 08/12/2026
Notes: No conference committee

rules, must be under the direct supervision of a licensed dentist*, except as provided in subsection (2).*

(2) A dental auxiliary who holds a certified dental assistant certification from the dental assisting national board may be supervised under general supervision."

Section 2. Effective date. [This act] is effective on passage and approval.

Approved April 18, 2019

CHAPTER NO. 158

[SB 160]

AN ACT ESTABLISHING THE FIREFIGHTER PROTECTION ACT BY CREATING PRESUMPTIVE COVERAGE UNDER WORKERS' COMPENSATION FOR CERTAIN DISEASES ASSOCIATED WITH FIREFIGHTING ACTIVITIES; PROVIDING CONDITIONS; PROVIDING A REBUTTAL OPTION FOR INSURERS; PROVIDING OPT-IN CHOICE FOR VOLUNTEER FIREFIGHTING ENTITIES; INCLUDING PRESUMPTIVE OCCUPATIONAL DISEASE WITHIN THE STATE'S PUBLIC POLICY PROVISIONS FOR WORKERS' COMPENSATION; PROVIDING DEFINITIONS; AMENDING SECTIONS 39-71-105, 39-71-124, AND 39-71-407, MCA; AND PROVIDING AN EFFECTIVE DATE AND AN APPLICABILITY DATE.

Be it enacted by the Legislature of the State of Montana:

Section 1. Presumptive occupational disease for firefighters -- rebuttal -- applicability -- definitions. (1) (a) A firefighter for whom coverage is required under the Workers' Compensation Act is presumed to have a claim for a presumptive occupational disease under the Workers' Compensation Act if the firefighter meets the requirements of [section 2] and is diagnosed with one or more of the diseases listed in subsection (2) within the period listed.

(b) Coverage under [section 2] and this section is optional for the employer of a firefighter for whom coverage under the Workers' Compensation Act is voluntary. An employer of a volunteer firefighter under 7-33-4109 or 7-33-4510 may elect as part of providing coverage under the Workers' Compensation Act to additionally obtain the presumptive occupational disease coverage, subject to the insurer agreeing to provide presumptive coverage.

(2) The following diseases are presumptive occupational diseases proximately caused by firefighting activities, provided that the evidence of the presumptive occupational disease becomes manifest after the number of years of the firefighter's employment as listed for each occupational disease and within 10 years of the last date on which the firefighter was engaged in firefighting activities for an employer:

(a) bladder cancer after 12 years;

(b) brain cancer of any type after 10 years;

(c) breast cancer after 5 years if the diagnosis occurs before the firefighter is 40 years old and is not known to be associated with a genetic predisposition to breast cancer;

(d) myocardial infarction after 10 years;

(e) colorectal cancer after 10 years;

(e) esophageal cancer after 10 years;

(f) kidney cancer after 15 years;

(g) leukemia after 5 years;

(h) mesothelioma or asbestosis after 10 years;
(i) multiple myeloma after 15 years;
(j) non-Hodgkin's lymphoma after 15 years; and
(k) lung cancer after 4 years.

(3) For purposes of calculating the number of years of a firefighter's employment history under subsection (2), a firefighter's employment history after July 1, 2014, may be calculated.

(4) The beneficiaries of a firefighter who otherwise would be eligible for presumptive occupational disease benefits under this section but who dies prior to filing a claim, as provided in [section 2], are eligible for death benefits in the same manner as for a death from an injury, as provided in 39-71-407. The beneficiaries under this subsection (4) are similarly bound by the provisions of exclusive remedy as provided in 39-71-411 and subject to the filing requirements in 39-71-601.

(5) (a) Subject to the provisions of subsection (5)(c), an insurer is liable for the payment of compensation for presumptive occupational disease benefits under this chapter in the same manner as provided in 39-71-407, including objective medical findings of a disease listed in subsection (2) but excluding the requirement in 39-71-407(10) that the objective medical findings trace a relationship between the presumptive occupational disease and the claimant's job history. For myocardial infarction or lung cancer under subsection (2), the diseases must be the type that can reasonably be caused by firefighting activities.

(b) (i) An insurer under plan 1, 2, or 3 that disputes a presumptive occupational disease claim has the burden of proof in establishing by a preponderance of the evidence that the firefighter is not suffering from a compensable presumptive occupational disease. An insurer that disputes the claim may pay benefits under 39-71-608 or 39-71-615 and may pursue dispute mechanisms established in Title 39, chapter 71, part 24.

(ii) An insurer is not liable for the payment of workers' compensation benefits for presumptive occupational disease if the insurer establishes by a preponderance of the evidence that the firefighter was not exposed during the course and scope of the firefighter's duties to smoke or particles in a quantity sufficient to have reasonably caused the disease claimed.

(c) A total claim payment by an insurer under this section is limited to $5 million for each claim.

(6) This section does not limit an insurer's ability to assert that the occupational disease was not caused by the firefighter's employment history as a firefighter.

(7) A firefighter or the firefighter's beneficiaries may pursue the dispute remedies as provided in Title 39, chapter 71, part 24, if an insurer disputes a claim.

(8) The use of the term "occupational disease" includes a presumptive occupational disease when used in the definitions in 39-71-116 for "claims examiner", "permanent partial disability", "primary medical services", and "treating physician" and when used in 39-71-107, 39-71-307, 39-71-412, 39-71-503, 39-71-601, 39-71-604, 39-71-606, 39-71-615, 39-71-703, 39-71-704, 39-71-713, 39-71-714, 39-71-717, 39-71-1011, 39-71-1036, 39-71-1041, 39-71-1042, 39-71-1101, 39-71-1110, 39-71-1504, 39-71-2311, 39-71-2312, 39-71-2313, 39-71-2316, and 39-71-4003.

(9) [Section 2] and this section:
(a) apply only to presumptive occupational diseases for firefighters; and
(b) do not apply to any other issue relating to workers' compensation and may not be used or cited as guidance in the administration of Title 33 or 37.

(10) For the purposes of [section 2] and this section, the following definitions apply:

(a) "Firefighter" means an individual whose primary duties involve extinguishing or investigating fires, with at least 1 year of firefighting operations in Montana beginning on or after July 1, 2019, as:

(i) a firefighter defined in 19-13-104;

(ii) a volunteer firefighter defined in 7-33-4510, but only if the volunteer firefighter's employer has elected coverage under Title 39, chapter 71, with an insurer that allows an election and the employer has opted separately to include presumptive occupational disease coverage under [section 2] and this section; or

(iii) a volunteer described in 7-33-4109 for a firefighting entity that has elected coverage under Title 39, chapter 71, with an insurer that allows an election and that has opted separately to include presumptive occupational disease coverage.

(b) "Firefighting activities" means actions required of a firefighter that expose the firefighter to extreme heat or inhalation or physical exposure to chemical fumes, smoke, particles, or other toxic gases arising directly out of employment as a firefighter.

(c) "Presumptive occupational disease" means harm or damage from one or more of the diseases listed under subsection (2) that is established by objective medical findings and that is contracted in the course and scope of employment as a firefighter from either a single day or work shift or for more than a single day or work shift but that is not specific to an accident.

Section 2. Conditions for claiming presumptive occupational disease. (1) Except as provided in subsection (4), the following must be satisfied for the presumption in [section 1] to apply:

(a) the firefighter must timely file a claim for a presumptive occupational disease under Title 39, chapter 71, as soon as the firefighter knows or should have known that the firefighter's condition resulted from a presumptive occupational disease; and

(b) (i) the firefighter must have undergone, within 90 days of hiring, a medical examination that did not reveal objective medical evidence or a family history of the presumptive occupational disease for which the presumption under [section 1] is sought; and

(ii) the firefighter must have undergone subsequent periodic medical examinations at least once every 2 years.

(2) (a) Subsection (1)(b) does not require the employer of a firefighter to provide or pay for a medical examination, either at the time of hiring or during the subsequent term of employment.

(b) If the employer of a firefighter does not provide or pay for a medical examination under subsection (1)(b), the firefighter may satisfy the requirements of subsection (1)(b) by obtaining the medical examination at the firefighter's expense or at the expense of another party.

(3) To qualify for a presumptive occupational disease, a firefighter may not:

(a) be a regular user of tobacco products;

(b) have a history of regular tobacco use in the 10 years preceding the filing of the claim under subsection (1)(a); or

(c) have been exposed by a cohabitant who regularly and habitually used tobacco products within the home for a period of 10 or more years prior to the diagnosis.

(4) A firefighter who, prior to [the effective date of this act], did not receive a medical examination as frequently as the intervals set forth in subsection

(1)(b) is not ineligible on that basis for a presumptive occupational disease claim under [section 1] and this section.

Section 3. Section 39-71-105, MCA, is amended to read:

"39-71-105. Declaration of public policy. For the purposes of interpreting and applying this chapter, the following is the public policy of this state:

(1) An objective of the Montana workers' compensation system is to provide, without regard to fault, wage-loss and medical benefits to a worker suffering from a work-related injury or disease. Wage-loss benefits are not intended to make an injured worker whole but are intended to provide assistance to a worker at a reasonable cost to the employer. Within that limitation, the wage-loss benefit should bear a reasonable relationship to actual wages lost as a result of a work-related injury or disease.

(2) It is the intent of the legislature to assert that a conclusive presumption exists that recognizes that a holder of a current, valid independent contractor exemption certificate issued by the department is an independent contractor if the person is working under the independent contractor exemption certificate. The holder of an independent contractor exemption certificate waives the rights, benefits, and obligations of this chapter unless the person has elected to be bound personally and individually by the provisions of compensation plan No. 1, 2, or 3.

(3) A worker's removal from the workforce because of a work-related injury or disease has a negative impact on the worker, the worker's family, the employer, and the general public. Therefore, an objective of the workers' compensation system is to return a worker to work as soon as possible after the worker has suffered a work-related injury or disease.

(4) Montana's workers' compensation and occupational disease insurance systems are intended to be primarily self-administering. Claimants should be able to speedily obtain benefits, and employers should be able to provide coverage at reasonably constant rates. To meet these objectives, the system must be designed to minimize reliance upon lawyers and the courts to obtain benefits and interpret liabilities.

(5) This chapter must be construed according to its terms and not liberally in favor of any party.

(6) It is the intent of the legislature that:

(a) *a* stress ~~claims~~ *claim*, often referred to as *a* "mental-mental ~~claims~~ *claim*" ~~and~~ *or a* "mental-physical ~~claims~~ *claim*", ~~are~~ *is* not compensable under Montana's workers' compensation and occupational disease laws. The legislature recognizes that these claims are difficult to objectively verify and that the claims have a potential to place an economic burden on the workers' compensation and occupational disease system. The legislature also recognizes that there are other states that do not provide compensation for various categories of stress claims and that stress claims have presented economic problems for certain other jurisdictions. In addition, not all injuries are compensable under the present system, and it is within the legislature's authority to define the limits of the workers' compensation and occupational disease system. *However, it is also within the legislature's authority to recognize the public service provided by firefighters and to join with other states that have extended a presumptive occupational disease recognition to firefighters.*

(b) for occupational disease *or presumptive occupational disease* claims, because of the nature of exposure, workers should not be required to provide notice to employers of the disease as required of injuries and that the requirements for filing of claims reflect consideration of when the worker knew or should have known that the worker's condition resulted from an

occupational disease *or a presumptive occupational disease*. The legislature recognizes that occupational diseases in the workplace are caused by events occurring on more than a single day or work shift and that ~~it is within the legislature's~~ *the legislature has the* authority to define an occupational disease *or a presumptive occupational disease* and establish the causal connection to the workplace."

Section 4. Section 39-71-124, MCA, is amended to read:

"39-71-124. Applicability of Workers' Compensation Act -- exceptions. Except as provided in 39-71-407, 39-71-601, and 39-71-603 *and as specified in [section 1]*, this chapter applies to injuries and occupational diseases."

Section 5. Section 39-71-407, MCA, is amended to read:

"39-71-407. Liability of insurers -- limitations. (1) For workers' compensation injuries, each insurer is liable for the payment of compensation, in the manner and to the extent provided in this section, to an employee of an employer covered under plan No. 1, plan No. 2, and the state fund under plan No. 3 that it insures who receives an injury arising out of and in the course of employment or, in the case of death from the injury, to the employee's beneficiaries, if any.

(2) An injury does not arise out of and in the course of employment when the employee is:

(a) on a paid or unpaid break, is not at a worksite of the employer, and is not performing any specific tasks for the employer during the break; or

(b) engaged in a social or recreational activity, regardless of whether the employer pays for any portion of the activity. The exclusion from coverage of this subsection (2)(b) does not apply to an employee who, at the time of injury, is on paid time while participating in a social or recreational activity or whose presence at the activity is required or requested by the employer. For the purposes of this subsection (2)(b), "requested" means the employer asked the employee to assume duties for the activity so that the employee's presence is not completely voluntary and optional and the injury occurred in the performance of those duties.

(3) (a) ~~An~~ *Subject to subsection (3)(c), an* insurer is liable for an injury, as defined in 39-71-119, only if the injury is established by objective medical findings and if the claimant establishes that it is more probable than not that:

(i) a claimed injury has occurred; or

(ii) a claimed injury has occurred and aggravated a preexisting condition.

(b) Proof that it was medically possible that a claimed injury occurred or that the claimed injury aggravated a preexisting condition is not sufficient to establish liability.

(c) Objective medical findings are sufficient for a presumptive occupational disease as defined in [section 1] but may be overcome by a preponderance of the evidence.

(4) (a) An employee who suffers an injury or dies while traveling is not covered by this chapter unless:

(i) the employer furnishes the transportation or the employee receives reimbursement from the employer for costs of travel, gas, oil, or lodging as a part of the employee's benefits or employment agreement and the travel is necessitated by and on behalf of the employer as an integral part or condition of the employment; or

(ii) the travel is required by the employer as part of the employee's job duties.

(b) A payment made to an employee under a collective bargaining agreement, personnel policy manual, or employee handbook or any other

document provided to the employee that is not wages but is designated as an incentive to work at a particular jobsite is not a reimbursement for the costs of travel, gas, oil, or lodging, and the employee is not covered under this chapter while traveling.

(5) Except as provided in subsection (6), an employee is not eligible for benefits otherwise payable under this chapter if the employee's use of alcohol or drugs not prescribed by a physician is the major contributing cause of the accident.

(6) (a) An employee who has received written certification, as defined in 50-46-302, from a physician for the use of marijuana for a debilitating medical condition and who is otherwise eligible for benefits payable under this chapter is subject to the limitations of subsections (6)(b) through (6)(d).

(b) An employee is not eligible for benefits otherwise payable under this chapter if the employee's use of marijuana for a debilitating medical condition, as defined in 50-46-302, is the major contributing cause of the injury or occupational disease.

(c) Nothing in this chapter may be construed to require an insurer to reimburse any person for costs associated with the use of marijuana for a debilitating medical condition, as defined in 50-46-302.

(d) In an accepted liability claim, the benefits payable under this chapter may not be increased or enhanced due to a worker's use of marijuana for a debilitating medical condition, as defined in 50-46-302. An insurer remains liable for those benefits that the worker would qualify for absent the worker's use of marijuana for a debilitating medical condition.

(7) The provisions of subsection (5) do not apply if the employer had knowledge of and failed to attempt to stop the employee's use of alcohol or drugs not prescribed by a physician. This subsection (7) does not apply to the use of marijuana for a debilitating medical condition because marijuana is not a prescribed drug.

(8) If there is no dispute that an insurer is liable for an injury but there is a liability dispute between two or more insurers, the insurer for the most recently filed claim shall pay benefits until that insurer proves that another insurer is responsible for paying benefits or until another insurer agrees to pay benefits. If it is later proven that the insurer for the most recently filed claim is not responsible for paying benefits, that insurer must receive reimbursement for benefits paid to the claimant from the insurer proven to be responsible.

(9) If a claimant who has reached maximum healing suffers a subsequent nonwork-related injury to the same part of the body, the workers' compensation insurer is not liable for any compensation or medical benefits caused by the subsequent nonwork-related injury.

(10) ~~An~~ *Except for cases of presumptive occupational disease as provided in [sections 1 and 2], an* employee is not eligible for benefits payable under this chapter unless the entitlement to benefits is established by objective medical findings that contain sufficient factual and historical information concerning the relationship of the worker's condition to the original injury.

(11) *(a)* For occupational diseases, every employer enrolled under plan No. 1, every insurer under plan No. 2, or the state fund under plan No. 3 is liable for the payment of compensation, in the manner and to the extent provided in this chapter, to an employee of an employer covered under plan No. 1, plan No. 2, or the state fund under plan No. 3 if the employee is diagnosed with a compensable occupational disease.

(b) The provisions of subsection (11)(a) apply to presumptive occupational disease if the employee is diagnosed and meets the conditions of [sections 1 and 2].

(12) An insurer is liable for an occupational disease only if the occupational disease:

(a) is established by objective medical findings; and

(b) arises out of or is contracted in the course and scope of employment. An occupational disease is considered to arise out of or be contracted in the course and scope of employment if the events occurring on more than a single day or work shift are the major contributing cause of the occupational disease in relation to other factors contributing to the occupational disease. *For the purposes of this subsection (12), an occupational disease is not the same as a presumptive occupational disease.*

(13) When compensation is payable for an occupational disease *or a presumptive occupational disease*, the only employer liable is the employer in whose employment the employee was last injuriously exposed to the hazard of the disease.

(14) When there is more than one insurer and only one employer at the time that the employee was injuriously exposed to the hazard of the disease, the liability rests with the insurer providing coverage at the earlier of:

(a) the time that the occupational disease *or presumptive occupational disease* was first diagnosed by a health care provider; or

(b) the time that the employee knew or should have known that the condition was the result of an occupational disease *or a presumptive occupational disease*.

(15) In the case of pneumoconiosis, any coal mine operator who has acquired a mine in the state or substantially all of the assets of a mine from a person who was an operator of the mine on or after December 30, 1969, is liable for and shall secure the payment of all benefits that would have been payable by that person with respect to miners previously employed in the mine if acquisition had not occurred and that person had continued to operate the mine, and the prior operator of the mine is not relieved of any liability under this section.

(16) As used in this section, "major contributing cause" means a cause that is the leading cause contributing to the result when compared to all other contributing causes."

Section 6. Codification instruction. [Sections 1 and 2] are intended to be codified as an integral part of Title 39, chapter 71, and the provisions of Title 39, chapter 71, apply to [sections 1 and 2].

Section 7. Contingent voidness. If a court finds any part of [this act] to be in violation of any clause of the U.S. or Montana constitutions relating to workers' compensation claims or a court through any other action or doctrine in law or equity applies the presumption in [sections 1 and 2] to another class of occupation other than firefighters, then [this act] is void.

Section 8. Effective date -- applicability. [This act] is effective July 1, 2019, and applies to presumptive occupational diseases diagnosed on or after July 1, 2019.

Approved April 18, 2019

CHAPTER NO. 159

[SB 163]

AN ACT GENERALLY REVISING LIGHTING IMPROVEMENT DISTRICT LAWS; REMOVING CONTRACT REQUIREMENTS FOR STREET LIGHTING IMPROVEMENT DISTRICTS; AMENDING SECTIONS 7-12-4307, 7-12-4308, 7-12-4311, AND 7-12-4353, MCA; AND PROVIDING AN EFFECTIVE DATE AND AN APPLICABILITY DATE.

CHAPTER NUMBER TO BILL NUMBER

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Ch. 3	HB 60
Ch. 4	HB 62
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Ch. 6	HB 117
Ch. 7	HB 46
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Ch. 10	SB 10
Ch. 11	HB 59
Ch. 12	HB 61
Ch. 13	HB 63
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2/22	2ND READING PASSED	47	3
2/25	3RD READING PASSED	47	3
	TRANSMITTED TO HOUSE		
2/27	REFERRED TO TRANSPORTATION		
3/13	HEARING		
3/15	COMMITTEE EXEC ACTION--BILL CONCURRED	14	0
3/16	COMMITTEE REPORT--BILL CONCURRED		
3/25	2ND READING CONCURRED AS AMD	92	8
3/27	3RD READING CONCURRED	89	10
	RETURNED TO SENATE WITH AMENDMENTS		
4/02	2ND READING HOUSE AMDS NOT CONCURRED	21	28
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4/05	CONFERENCE COMMITTEE APPOINTED		
4/08	HEARING		
4/09	HEARING		
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4/11	2ND READING CONFERENCE COMMITTEE REPORT ADOPTED	59	41
4/12	3RD READING CONFERENCE COMMITTEE REPORT ADOPTED	49	1
4/12	3RD READING CONFERENCE COMMITTEE REPORT ADOPTED	69	28
4/12	SENT TO ENROLLING		
4/16	RETURNED FROM ENROLLING		
4/26	SIGNED BY PRESIDENT		
4/26	SIGNED BY SPEAKER		
4/29	TRANSMITTED TO GOVERNOR		
5/07	SIGNED BY GOVERNOR		
5/08	CHAPTER NUMBER ASSIGNED		
	CHAPTER NUMBER 309		
	EFFECTIVE DATE: 10/01/2019 - ALL SECTIONS		

SB 159 INTRODUCED BY K. REGIER *LC0561 DRAFTER: SCURR*

REQUIRING CERTAIN NONPROFIT HOSPITAL BOARDS TO BE ELECTED

1/22	INTRODUCED
1/22	FISCAL NOTE REQUESTED
1/30	FISCAL NOTE RECEIVED
1/30	REFERRED TO PUBLIC HEALTH, WELFARE AND SAFETY
1/30	FISCAL NOTE PRINTED
2/04	HEARING
2/06	TABLED IN COMMITTEE
3/01	MISSED DEADLINE FOR GENERAL BILL TRANSMITTAL
	DIED IN STANDING COMMITTEE

SB 160 INTRODUCED BY MCCONNELL *LC1077 DRAFTER: MURDO*

PROVIDE WORKERS' COMPENSATION FOR PRESUMPTIVE DISEASES OF FIREFIGHTERS

12/07	FISCAL NOTE PROBABLE
1/22	INTRODUCED
1/22	FISCAL NOTE REQUESTED
1/23	REFERRED TO BUSINESS, LABOR, AND ECONOMIC AFFAIRS
1/29	HEARING
1/30	FISCAL NOTE RECEIVED

2/01	FISCAL NOTE PRINTED		
2/06	COMMITTEE EXEC ACTION--BILL PASSED AS AMENDED	9	1
2/07	COMMITTEE REPORT--BILL PASSED AS AMENDED		
2/11	2ND READING PASSED AS AMENDED	35	15
2/13	3RD READING PASSED	35	15
	TRANSMITTED TO HOUSE		
2/15	REFERRED TO BUSINESS AND LABOR		
3/15	HEARING		
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4/05	2ND READING CONCURRED	95	5
4/08	3RD READING CONCURRED	89	8
	RETURNED TO SENATE WITH AMENDMENTS		
4/12	2ND READING HOUSE AMDS CONCURRED	41	9
4/13	3RD READING PASSED AS AMENDED BY HOUSE	40	10
4/13	SENT TO ENROLLING		
4/16	RETURNED FROM ENROLLING		
4/17	SIGNED BY PRESIDENT		
4/17	SIGNED BY SPEAKER		
4/17	TRANSMITTED TO GOVERNOR		
4/18	SIGNED BY GOVERNOR		
4/19	CHAPTER NUMBER ASSIGNED		
	CHAPTER NUMBER 158		
	EFFECTIVE DATE: 7/01/2019 - ALL SECTIONS		

SB 161 INTRODUCED BY JACOBSON *LC1223 DRAFTER: ALDRICH*

ALLOW CONCURRENT SERVICE AS WATER/SEWER DIRECTOR AND RURAL FIRE DISTRICT TRUSTEE

1/22	INTRODUCED		
1/23	REFERRED TO LOCAL GOVERNMENT		
1/28	HEARING		
1/30	COMMITTEE EXEC ACTION--BILL PASSED AS AMENDED	9	0
1/31	COMMITTEE REPORT--BILL PASSED AS AMENDED		
2/05	2ND READING PASSED	35	15
2/06	3RD READING PASSED	44	5
	TRANSMITTED TO HOUSE		
2/08	REFERRED TO STATE ADMINISTRATION		
3/13	HEARING		
3/22	TABLED IN COMMITTEE		
	DIED IN STANDING COMMITTEE		

SB 162 INTRODUCED BY R. WEBB *LC1443 DRAFTER: ALDRICH*

GENERALLY REVISE ELECTION LAWS ON ABSENTEE AND MAIL BALLOTS

1/22	INTRODUCED		
1/23	REFERRED TO STATE ADMINISTRATION		
2/13	HEARING		
2/15	COMMITTEE EXEC ACTION--BILL PASSED AS AMENDED	6	2
2/16	COMMITTEE REPORT--BILL PASSED AS AMENDED		
2/19	2ND READING PASSED	35	15
2/20	3RD READING PASSED	30	19

SENATE BILL NO. 160

INTRODUCED BY N. MCCONNELL

A BILL FOR AN ACT ENTITLED: "AN ACT ESTABLISHING THE FIREFIGHTER PROTECTION ACT BY CREATING PRESUMPTIVE COVERAGE UNDER WORKERS' COMPENSATION FOR CERTAIN DISEASES ASSOCIATED WITH FIREFIGHTING ACTIVITIES; PROVIDING CONDITIONS; PROVIDING A REBUTTAL OPTION FOR INSURERS; PROVIDING OPT-IN CHOICE FOR VOLUNTEER FIREFIGHTING ENTITIES; INCLUDING PRESUMPTIVE OCCUPATIONAL DISEASE WITHIN THE STATE'S PUBLIC POLICY PROVISIONS FOR WORKERS' COMPENSATION; PROVIDING DEFINITIONS; AMENDING SECTIONS 39-71-105, 39-71-124, AND 39-71-407, MCA; AND PROVIDING AN EFFECTIVE DATE AND AN APPLICABILITY DATE."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

NEW SECTION. **Section 1. Presumptive occupational disease for firefighters -- rebuttal -- applicability -- definitions.** (1) (a) A firefighter for whom coverage is required under the Workers' Compensation Act is presumed to have a claim for a presumptive occupational disease under the Workers' Compensation Act if the firefighter meets the requirements of [section 2] and is diagnosed with one or more of the diseases listed in subsection (2) within the period listed.

(b) Coverage under [section 2] and this section is optional for the employer of a firefighter for whom coverage under the Workers' Compensation Act is voluntary. An employer of a volunteer firefighter under 7-33-4109 or 7-33-4510 may elect as part of providing coverage under the Workers' Compensation Act to additionally obtain the presumptive occupational disease coverage, subject to the insurer agreeing to provide presumptive coverage.

(2) The following diseases are presumptive occupational diseases proximately caused by firefighting activities, provided that the evidence of the presumptive occupational disease becomes manifest after the number of years of the firefighter's employment as listed for each occupational disease or within 10 years of the last date on which the firefighter was engaged in firefighting activities for an employer:

(a) bladder cancer after 12 years;

(b) brain cancer of any type after 10 years;

(c) breast cancer after 5 years if the diagnosis occurs before the firefighter is 40 years old and is not known to be associated with a genetic predisposition to breast cancer;

(d) cardiovascular disease after 4 years;

(e) colorectal cancer after 10 years;

(e) esophageal cancer after 10 years;

(f) kidney cancer after 15 years;

(g) leukemia after 5 years;

(h) mesothelioma after 10 years;

(i) multiple myeloma after 15 years;

(j) non-Hodgkin's lymphoma after 15 years;

(k) posttraumatic stress disorder related to experiences encountered during firefighting activities; or

(l) pulmonary or respiratory disease after 4 years.

(3) The beneficiaries of a firefighter who otherwise would be eligible for presumptive occupational disease benefits under this section but who dies prior to filing a claim, as provided in [section 2], are eligible for death benefits in the same manner as for a death from an injury, as provided in 39-71-407. The beneficiaries under this subsection (3) are similarly bound by the provisions of exclusive remedy as provided in 39-71-411 and subject to the filing requirements in 39-71-601.

(4) (a) An insurer is liable for the payment of compensation for presumptive occupational disease benefits under this chapter in the same manner as provided in 39-71-407, including objective medical findings of a disease listed in subsection (2) but excluding the requirement in 39-71-407(10) that the objective medical findings trace a relationship between the presumptive occupational disease and the claimant's job history.

(b) An insurer under plan 1, 2, or 3 that disputes a presumptive occupational disease claim has the burden of proof in establishing by substantial evidence that the firefighter is not suffering from a compensable presumptive occupational disease. An insurer that disputes the claim may pay benefits under 39-71-608 or 39-71-615 and may pursue dispute mechanisms established in Title 39, chapter 71, part 24.

(c) A firefighter or the firefighter's beneficiaries may pursue the dispute remedies as provided in Title 39, chapter 71, part 24, if an insurer disputes a claim.

(5) The use of the term "occupational disease" includes a presumptive occupational disease when used in the definitions in 39-71-116 for "claims examiner", "permanent partial disability", "primary medical services", and "treating physician" and when used in 39-71-107, 39-71-307, 39-71-412, 39-71-503, 39-71-601, 39-71-604,

39-71-606, 39-71-615, 39-71-703, 39-71-704, 39-71-713, 39-71-714, 39-71-717, 39-71-1011, 39-71-1036, 39-71-1041, 39-71-1042, 39-71-1101, 39-71-1110, 39-71-1504, 39-71-2311, 39-71-2312, 39-71-2313, 39-71-2316, and 39-71-4003.

(6) For the purposes of [section 2] and this section, the following definitions apply:

(a) "Firefighter" means an individual whose primary duties involve extinguishing or investigating fires as:

(i) a firefighter defined in 19-13-104;

(ii) a volunteer firefighter defined in 7-33-4510, but only if the volunteer firefighter's employer has elected coverage under Title 39, chapter 71, with an insurer that allows an election and the employer has opted separately to include presumptive occupational disease coverage under [section 2] and this section; or

(iii) a volunteer described in 7-33-4109 for a firefighting entity that has elected coverage under Title 39, chapter 71, with an insurer that allows an election and that has opted separately to include presumptive occupational disease coverage.

(b) "Firefighting activities" means actions required of a firefighter that expose the firefighter to extreme heat or inhalation or physical exposure to chemical fumes, smoke, particles, or other toxic gases arising directly out of employment as a firefighter.

(c) "Posttraumatic stress disorder" has the meaning provided in the American psychiatric association's fifth edition of its Diagnostic and Statistical Manual of Mental Disorders.

(d) "Presumptive occupational disease" means harm or damage from one or more of the diseases listed under subsection (2) that is established by objective medical findings and that is contracted in the course and scope of employment as a firefighter from either a single day or work shift or for more than a single day or work shift but that is not specific to an accident. The term may include a physical or mental condition arising from posttraumatic stress disorder associated with firefighting activities.

(e) "Substantial evidence" means:

(i) the conditions of [section 2] have not been met; or

(ii) the presumptive occupational disease occurred without the firefighter having had firefighting duties that involved close proximity to fires and smoke or did not have exposure to smoke or particles in sufficient quantities to have reasonably caused a presumptive occupational disease.

NEW SECTION. **Section 2. Conditions for claiming presumptive occupational disease.** (1) Except as provided in subsection (4), the following must be satisfied for the presumption in [section 1] to apply:

(a) the firefighter must timely file a claim for a presumptive occupational disease under Title 39, chapter 71, as soon as the firefighter knows or should have known that the firefighter's condition resulted from a presumptive occupational disease; and

(b) (i) the firefighter must have undergone, within 90 days of hiring, a medical examination that did not reveal substantial evidence of the presumptive occupational disease for which the presumption under [section 1] is sought; and

(ii) the firefighter must have undergone subsequent periodic medical examinations at least once every 2 years.

(2) (a) Subsection (1)(b) does not require the employer of a firefighter to provide or pay for a medical examination, either at the time of hiring or during the subsequent term of employment.

(b) If the employer of a firefighter does not provide or pay for a medical examination under subsection (1)(b), the firefighter may satisfy the requirements of subsection (1)(b) by obtaining the medical examination at the firefighter's expense or at the expense of another party.

(3) To qualify for a noncancer respiratory presumptive occupational disease, a firefighter may not:

(a) be a regular user of tobacco products;

(b) have a history of regular tobacco use in the 5 years preceding the filing of the claim under subsection (1)(a); or

(c) have been exposed by a cohabitant who regularly and habitually used tobacco products within the home for a period of 10 or more years prior to the diagnosis.

(4) A firefighter who, prior to [the effective date of this act], did not receive a medical examination as frequently as the intervals set forth in subsection (1)(b) is not ineligible on that basis for a presumptive occupational disease claim under [section 1] and this section.

Section 3. Section 39-71-105, MCA, is amended to read:

"39-71-105. Declaration of public policy. For the purposes of interpreting and applying this chapter, the following is the public policy of this state:

(1) An objective of the Montana workers' compensation system is to provide, without regard to fault, wage-loss and medical benefits to a worker suffering from a work-related injury or disease. Wage-loss benefits are not intended to make an injured worker whole but are intended to provide assistance to a worker at a reasonable cost to the employer. Within that limitation, the wage-loss benefit should bear a reasonable

relationship to actual wages lost as a result of a work-related injury or disease.

(2) It is the intent of the legislature to assert that a conclusive presumption exists that recognizes that a holder of a current, valid independent contractor exemption certificate issued by the department is an independent contractor if the person is working under the independent contractor exemption certificate. The holder of an independent contractor exemption certificate waives the rights, benefits, and obligations of this chapter unless the person has elected to be bound personally and individually by the provisions of compensation plan No. 1, 2, or 3.

(3) A worker's removal from the workforce because of a work-related injury or disease has a negative impact on the worker, the worker's family, the employer, and the general public. Therefore, an objective of the workers' compensation system is to return a worker to work as soon as possible after the worker has suffered a work-related injury or disease.

(4) Montana's workers' compensation and occupational disease insurance systems are intended to be primarily self-administering. Claimants should be able to speedily obtain benefits, and employers should be able to provide coverage at reasonably constant rates. To meet these objectives, the system must be designed to minimize reliance upon lawyers and the courts to obtain benefits and interpret liabilities.

(5) This chapter must be construed according to its terms and not liberally in favor of any party.

(6) It is the intent of the legislature that:

(a) except as provided in [sections 1 and 2] for firefighters' presumptive occupational disease claims, a stress ~~claims~~ claim, often referred to as a "mental-mental ~~claims~~ claim" ~~and~~ or a "mental-physical ~~claims~~ claim", ~~are~~ is not compensable under Montana's workers' compensation and occupational disease laws. The legislature recognizes that these claims are difficult to objectively verify and that the claims have a potential to place an economic burden on the workers' compensation and occupational disease system. The legislature also recognizes that there are other states that do not provide compensation for various categories of stress claims and that stress claims have presented economic problems for certain other jurisdictions. In addition, not all injuries are compensable under the present system, and it is within the legislature's authority to define the limits of the workers' compensation and occupational disease system. However, it is also within the legislature's authority to recognize the public service provided by firefighters and to join with other states that have extended a presumptive occupational disease recognition to firefighters.

(b) for occupational disease or presumptive occupational disease claims, because of the nature of exposure, workers should not be required to provide notice to employers of the disease as required of injuries

and that the requirements for filing of claims reflect consideration of when the worker knew or should have known that the worker's condition resulted from an occupational disease or a presumptive occupational disease. The legislature recognizes that occupational diseases in the workplace are caused by events occurring on more than a single day or work shift and that ~~it is within the legislature's~~ the legislature has the authority to define an occupational disease or a presumptive occupational disease and establish the causal connection to the workplace."

Section 4. Section 39-71-124, MCA, is amended to read:

"39-71-124. Applicability of Workers' Compensation Act -- exceptions. Except as provided in 39-71-407, 39-71-601, and 39-71-603 and as specified in [section 1], this chapter applies to injuries and occupational diseases."

Section 5. Section 39-71-407, MCA, is amended to read:

"39-71-407. Liability of insurers -- limitations. (1) For workers' compensation injuries, each insurer is liable for the payment of compensation, in the manner and to the extent provided in this section, to an employee of an employer covered under plan No. 1, plan No. 2, and the state fund under plan No. 3 that it insures who receives an injury arising out of and in the course of employment or, in the case of death from the injury, to the employee's beneficiaries, if any.

(2) An injury does not arise out of and in the course of employment when the employee is:

(a) on a paid or unpaid break, is not at a worksite of the employer, and is not performing any specific tasks for the employer during the break; or

(b) engaged in a social or recreational activity, regardless of whether the employer pays for any portion of the activity. The exclusion from coverage of this subsection (2)(b) does not apply to an employee who, at the time of injury, is on paid time while participating in a social or recreational activity or whose presence at the activity is required or requested by the employer. For the purposes of this subsection (2)(b), "requested" means the employer asked the employee to assume duties for the activity so that the employee's presence is not completely voluntary and optional and the injury occurred in the performance of those duties.

(3) (a) ~~An~~ Subject to subsection (3)(c), an insurer is liable for an injury, as defined in 39-71-119, only if the injury is established by objective medical findings and if the claimant establishes that it is more probable than not that:

(i) a claimed injury has occurred; or

(ii) a claimed injury has occurred and aggravated a preexisting condition.

(b) Proof that it was medically possible that a claimed injury occurred or that the claimed injury aggravated a preexisting condition is not sufficient to establish liability.

(c) Objective medical findings are sufficient for a presumptive occupational disease as defined in [section 1] but may be overcome by substantial evidence, as defined in [section 1].

(4) (a) An employee who suffers an injury or dies while traveling is not covered by this chapter unless:

(i) the employer furnishes the transportation or the employee receives reimbursement from the employer for costs of travel, gas, oil, or lodging as a part of the employee's benefits or employment agreement and the travel is necessitated by and on behalf of the employer as an integral part or condition of the employment; or

(ii) the travel is required by the employer as part of the employee's job duties.

(b) A payment made to an employee under a collective bargaining agreement, personnel policy manual, or employee handbook or any other document provided to the employee that is not wages but is designated as an incentive to work at a particular jobsite is not a reimbursement for the costs of travel, gas, oil, or lodging, and the employee is not covered under this chapter while traveling.

(5) Except as provided in subsection (6), an employee is not eligible for benefits otherwise payable under this chapter if the employee's use of alcohol or drugs not prescribed by a physician is the major contributing cause of the accident.

(6) (a) An employee who has received written certification, as defined in 50-46-302, from a physician for the use of marijuana for a debilitating medical condition and who is otherwise eligible for benefits payable under this chapter is subject to the limitations of subsections (6)(b) through (6)(d).

(b) An employee is not eligible for benefits otherwise payable under this chapter if the employee's use of marijuana for a debilitating medical condition, as defined in 50-46-302, is the major contributing cause of the injury or occupational disease.

(c) Nothing in this chapter may be construed to require an insurer to reimburse any person for costs associated with the use of marijuana for a debilitating medical condition, as defined in 50-46-302.

(d) In an accepted liability claim, the benefits payable under this chapter may not be increased or enhanced due to a worker's use of marijuana for a debilitating medical condition, as defined in 50-46-302. An insurer remains liable for those benefits that the worker would qualify for absent the worker's use of marijuana for a debilitating medical condition.

(7) The provisions of subsection (5) do not apply if the employer had knowledge of and failed to attempt to stop the employee's use of alcohol or drugs not prescribed by a physician. This subsection (7) does not apply to the use of marijuana for a debilitating medical condition because marijuana is not a prescribed drug.

(8) If there is no dispute that an insurer is liable for an injury but there is a liability dispute between two or more insurers, the insurer for the most recently filed claim shall pay benefits until that insurer proves that another insurer is responsible for paying benefits or until another insurer agrees to pay benefits. If it is later proven that the insurer for the most recently filed claim is not responsible for paying benefits, that insurer must receive reimbursement for benefits paid to the claimant from the insurer proven to be responsible.

(9) If a claimant who has reached maximum healing suffers a subsequent nonwork-related injury to the same part of the body, the workers' compensation insurer is not liable for any compensation or medical benefits caused by the subsequent nonwork-related injury.

(10) ~~An~~ Except for cases of presumptive occupational disease as provided in [sections 1 and 2], an employee is not eligible for benefits payable under this chapter unless the entitlement to benefits is established by objective medical findings that contain sufficient factual and historical information concerning the relationship of the worker's condition to the original injury.

(11) (a) For occupational diseases, every employer enrolled under plan No. 1, every insurer under plan No. 2, or the state fund under plan No. 3 is liable for the payment of compensation, in the manner and to the extent provided in this chapter, to an employee of an employer covered under plan No. 1, plan No. 2, or the state fund under plan No. 3 if the employee is diagnosed with a compensable occupational disease.

(b) The provisions of subsection (11)(a) apply to presumptive occupational disease if the employee is diagnosed and meets the conditions of [sections 1 and 2].

(12) An insurer is liable for an occupational disease only if the occupational disease:

(a) is established by objective medical findings; and

(b) arises out of or is contracted in the course and scope of employment. An occupational disease is considered to arise out of or be contracted in the course and scope of employment if the events occurring on more than a single day or work shift are the major contributing cause of the occupational disease in relation to other factors contributing to the occupational disease. For the purposes of this subsection (12), an occupational disease is not the same as a presumptive occupational disease.

(13) When compensation is payable for an occupational disease or a presumptive occupational disease, the only employer liable is the employer in whose employment the employee was last injuriously exposed to the

hazard of the disease.

(14) When there is more than one insurer and only one employer at the time that the employee was injuriously exposed to the hazard of the disease, the liability rests with the insurer providing coverage at the earlier of:

(a) the time that the occupational disease or presumptive occupational disease was first diagnosed by a health care provider; or

(b) the time that the employee knew or should have known that the condition was the result of an occupational disease or a presumptive occupational disease.

(15) In the case of pneumoconiosis, any coal mine operator who has acquired a mine in the state or substantially all of the assets of a mine from a person who was an operator of the mine on or after December 30, 1969, is liable for and shall secure the payment of all benefits that would have been payable by that person with respect to miners previously employed in the mine if acquisition had not occurred and that person had continued to operate the mine, and the prior operator of the mine is not relieved of any liability under this section.

(16) As used in this section, "major contributing cause" means a cause that is the leading cause contributing to the result when compared to all other contributing causes."

NEW SECTION. **Section 6. Codification instruction.** [Sections 1 and 2] are intended to be codified as an integral part of Title 39, chapter 71, and the provisions of Title 39, chapter 71, apply to [sections 1 and 2].

NEW SECTION. **Section 7. Effective date -- applicability.** [This act] is effective July 1, 2019, and applies to presumptive occupational diseases diagnosed on or after July 1, 2019.

- END -

SENATE BILL NO. 160

INTRODUCED BY N. MCCONNELL, K. ABBOTT, J. BACHMEIER, J. BAHR, D. BARRETT, B. BENNETT, B. BESSETTE, L. BISHOP, C. BOLAND, Z. BROWN, M. CAFERRO, J. COHENOUR, W. CURDY, K. DUDIK, M. DUNWELL, D. FERN, R. FITZGERALD, P. FLOWERS, M. FUNK, F. GARNER, J. GROSS, B. GRUBBS, J. HAMILTON, D. HARVEY, D. HAYMAN, M. HOPKINS, T. JACOBSON, J. KARJALA, K. KELKER, C. KEOGH, E. KERR-CARPENTER, R. LYNCH, M. MACDONALD, S. MALEK, M. MARLER, E. MCCLAFFERTY, M. MCNALLY, S. MORIGEAU, A. OLSEN, R. PEPPERS, Z. PERRY, G. PIERSON, J. POMNICHOWSKI, J. READ, T. RICHMOND, T. RUNNINGWOLF, M. RYAN, W. SALES, D. SANDS, C. SCHREINER, J. SESSO, R. SHAW, J. SMALL, B. SMITH, F. SMITH, S. STEWART PEREGOY, K. SULLIVAN, S. VINTON, T. WELCH, T. WINTER, T. WOODS

A BILL FOR AN ACT ENTITLED: "AN ACT ESTABLISHING THE FIREFIGHTER PROTECTION ACT BY CREATING PRESUMPTIVE COVERAGE UNDER WORKERS' COMPENSATION FOR CERTAIN DISEASES ASSOCIATED WITH FIREFIGHTING ACTIVITIES; PROVIDING CONDITIONS; PROVIDING A REBUTTAL OPTION FOR INSURERS; PROVIDING OPT-IN CHOICE FOR VOLUNTEER FIREFIGHTING ENTITIES; INCLUDING PRESUMPTIVE OCCUPATIONAL DISEASE WITHIN THE STATE'S PUBLIC POLICY PROVISIONS FOR WORKERS' COMPENSATION; PROVIDING DEFINITIONS; AMENDING SECTIONS 39-71-105, 39-71-124, AND 39-71-407, MCA; AND PROVIDING AN EFFECTIVE DATE AND AN APPLICABILITY DATE."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

NEW SECTION. **Section 1. Presumptive occupational disease for firefighters -- rebuttal -- applicability -- definitions.** (1) (a) A firefighter for whom coverage is required under the Workers' Compensation Act is presumed to have a claim for a presumptive occupational disease under the Workers' Compensation Act if the firefighter meets the requirements of [section 2] and is diagnosed with one or more of the diseases listed in subsection (2) within the period listed.

(b) Coverage under [section 2] and this section is optional for the employer of a firefighter for whom coverage under the Workers' Compensation Act is voluntary. An employer of a volunteer firefighter under 7-33-4109 or 7-33-4510 may elect as part of providing coverage under the Workers' Compensation Act to

additionally obtain the presumptive occupational disease coverage, subject to the insurer agreeing to provide presumptive coverage.

(2) The following diseases are presumptive occupational diseases proximately caused by firefighting activities, provided that the evidence of the presumptive occupational disease becomes manifest after the number of years of the firefighter's employment as listed for each occupational disease ~~or~~ AND within 10 years of the last date on which the firefighter was engaged in firefighting activities for an employer:

(a) bladder cancer after 12 years;

(b) brain cancer of any type after 10 years;

(c) breast cancer after 5 years if the diagnosis occurs before the firefighter is 40 years old and is not known to be associated with a genetic predisposition to breast cancer;

(d) cardiovascular disease after ~~4~~ 10 years;

(e) colorectal cancer after 10 years;

(e) esophageal cancer after 10 years;

(f) kidney cancer after 15 years;

(g) leukemia after 5 years;

(h) mesothelioma after 10 years;

(i) multiple myeloma after 15 years;

(j) non-Hodgkin's lymphoma after 15 years; AND

~~(k) posttraumatic stress disorder related to experiences encountered during firefighting activities; or~~

~~(l)~~(K) pulmonary or respiratory disease after 4 years.

(3) FOR PURPOSES OF CALCULATING THE NUMBER OF YEARS OF A FIREFIGHTER'S EMPLOYMENT HISTORY UNDER SUBSECTION (2), A FIREFIGHTER'S EMPLOYMENT HISTORY AFTER JULY 1, 2014, MAY BE CALCULATED.

~~(3)~~(4) The beneficiaries of a firefighter who otherwise would be eligible for presumptive occupational disease benefits under this section but who dies prior to filing a claim, as provided in [section 2], are eligible for death benefits in the same manner as for a death from an injury, as provided in 39-71-407. The beneficiaries under this subsection ~~(3)~~ (4) are similarly bound by the provisions of exclusive remedy as provided in 39-71-411 and subject to the filing requirements in 39-71-601.

~~(4)~~(5) (a) An insurer is liable for the payment of compensation for presumptive occupational disease benefits under this chapter in the same manner as provided in 39-71-407, including objective medical findings of a disease listed in subsection (2) but excluding the requirement in 39-71-407(10) that the objective medical

findings trace a relationship between the presumptive occupational disease and the claimant's job history. FOR PULMONARY OR RESPIRATORY DISEASES UNDER SUBSECTION (2), THE DISEASES MUST BE THE TYPE THAT CAN REASONABLY BE CAUSED BY FIREFIGHTING ACTIVITIES.

(b) An insurer under plan 1, 2, or 3 that disputes a presumptive occupational disease claim has the burden of proof in establishing by ~~substantial~~ A PREPONDERANCE OF THE evidence that the firefighter is not suffering from a compensable presumptive occupational disease. An insurer that disputes the claim may pay benefits under 39-71-608 or 39-71-615 and may pursue dispute mechanisms established in Title 39, chapter 71, part 24. NOTHING IN THIS SECTION LIMITS AN INSURER'S ABILITY TO ASSERT THAT THE OCCUPATIONAL DISEASE WAS NOT CAUSED BY THE FIREFIGHTER'S EMPLOYMENT HISTORY AS A FIREFIGHTER.

(c) A firefighter or the firefighter's beneficiaries may pursue the dispute remedies as provided in Title 39, chapter 71, part 24, if an insurer disputes a claim.

~~(5)~~(6) The use of the term "occupational disease" includes a presumptive occupational disease when used in the definitions in 39-71-116 for "claims examiner", "permanent partial disability", "primary medical services", and "treating physician" and when used in 39-71-107, 39-71-307, 39-71-412, 39-71-503, 39-71-601, 39-71-604, 39-71-606, 39-71-615, 39-71-703, 39-71-704, 39-71-713, 39-71-714, 39-71-717, 39-71-1011, 39-71-1036, 39-71-1041, 39-71-1042, 39-71-1101, 39-71-1110, 39-71-1504, 39-71-2311, 39-71-2312, 39-71-2313, 39-71-2316, and 39-71-4003.

(7) [SECTION 2] AND THIS SECTION:

(A) APPLY ONLY TO PRESUMPTIVE OCCUPATIONAL DISEASES FOR FIREFIGHTERS; AND

(B) DO NOT APPLY TO ANY OTHER ISSUE RELATING TO WORKERS' COMPENSATION AND MAY NOT BE USED OR CITED AS GUIDANCE IN THE ADMINISTRATION OF TITLE 33 OR 37.

~~(6)~~(8) For the purposes of [section 2] and this section, the following definitions apply:

(a) "Firefighter" means an individual whose primary duties involve extinguishing or investigating fires, WITH AT LEAST 1 YEAR OF FIREFIGHTING OPERATIONS IN MONTANA BEGINNING ON OR AFTER JULY 1, 2019, as:

(i) a firefighter defined in 19-13-104;

(ii) a volunteer firefighter defined in 7-33-4510, but only if the volunteer firefighter's employer has elected coverage under Title 39, chapter 71, with an insurer that allows an election and the employer has opted separately to include presumptive occupational disease coverage under [section 2] and this section; or

(iii) a volunteer described in 7-33-4109 for a firefighting entity that has elected coverage under Title 39, chapter 71, with an insurer that allows an election and that has opted separately to include presumptive

occupational disease coverage.

(b) "Firefighting activities" means actions required of a firefighter that expose the firefighter to extreme heat or inhalation or physical exposure to chemical fumes, smoke, particles, or other toxic gases arising directly out of employment as a firefighter.

~~(c) "Posttraumatic stress disorder" has the meaning provided in the American psychiatric association's fifth edition of its Diagnostic and Statistical Manual of Mental Disorders.~~

~~(d)~~(c) "Presumptive occupational disease" means harm or damage from one or more of the diseases listed under subsection (2) that is established by objective medical findings and that is contracted in the course and scope of employment as a firefighter from either a single day or work shift or for more than a single day or work shift but that is not specific to an accident. ~~The term may include a physical or mental condition arising from posttraumatic stress disorder associated with firefighting activities.~~

~~(e) "Substantial evidence" means:~~

~~(i) the conditions of [section 2] have not been met; or~~

~~(ii) the presumptive occupational disease occurred without the firefighter having had firefighting duties that involved close proximity to fires and smoke or did not have exposure to smoke or particles in sufficient quantities to have reasonably caused a presumptive occupational disease.~~

NEW SECTION. **Section 2. Conditions for claiming presumptive occupational disease.** (1) Except as provided in subsection (4), the following must be satisfied for the presumption in [section 1] to apply:

(a) the firefighter must timely file a claim for a presumptive occupational disease under Title 39, chapter 71, as soon as the firefighter knows or should have known that the firefighter's condition resulted from a presumptive occupational disease; and

(b) (i) the firefighter must have undergone, within 90 days of hiring, a medical examination that did not reveal ~~substantial~~ OBJECTIVE MEDICAL evidence of the presumptive occupational disease for which the presumption under [section 1] is sought; and

(ii) the firefighter must have undergone subsequent periodic medical examinations at least once every 2 years.

(2) (a) Subsection (1)(b) does not require the employer of a firefighter to provide or pay for a medical examination, either at the time of hiring or during the subsequent term of employment.

(b) If the employer of a firefighter does not provide or pay for a medical examination under subsection

(1)(b), the firefighter may satisfy the requirements of subsection (1)(b) by obtaining the medical examination at the firefighter's expense or at the expense of another party.

(3) To qualify for a ~~noncancer respiratory~~ presumptive occupational disease, a firefighter may not:

(a) be a regular user of tobacco products;

(b) have a history of regular tobacco use in the ~~5~~ 10 years preceding the filing of the claim under subsection (1)(a); or

(c) have been exposed by a cohabitant who regularly and habitually used tobacco products within the home for a period of 10 or more years prior to the diagnosis.

(4) A firefighter who, prior to [the effective date of this act], did not receive a medical examination as frequently as the intervals set forth in subsection (1)(b) is not ineligible on that basis for a presumptive occupational disease claim under [section 1] and this section.

Section 3. Section 39-71-105, MCA, is amended to read:

"39-71-105. Declaration of public policy. For the purposes of interpreting and applying this chapter, the following is the public policy of this state:

(1) An objective of the Montana workers' compensation system is to provide, without regard to fault, wage-loss and medical benefits to a worker suffering from a work-related injury or disease. Wage-loss benefits are not intended to make an injured worker whole but are intended to provide assistance to a worker at a reasonable cost to the employer. Within that limitation, the wage-loss benefit should bear a reasonable relationship to actual wages lost as a result of a work-related injury or disease.

(2) It is the intent of the legislature to assert that a conclusive presumption exists that recognizes that a holder of a current, valid independent contractor exemption certificate issued by the department is an independent contractor if the person is working under the independent contractor exemption certificate. The holder of an independent contractor exemption certificate waives the rights, benefits, and obligations of this chapter unless the person has elected to be bound personally and individually by the provisions of compensation plan No. 1, 2, or 3.

(3) A worker's removal from the workforce because of a work-related injury or disease has a negative impact on the worker, the worker's family, the employer, and the general public. Therefore, an objective of the workers' compensation system is to return a worker to work as soon as possible after the worker has suffered a work-related injury or disease.

(4) Montana's workers' compensation and occupational disease insurance systems are intended to be primarily self-administering. Claimants should be able to speedily obtain benefits, and employers should be able to provide coverage at reasonably constant rates. To meet these objectives, the system must be designed to minimize reliance upon lawyers and the courts to obtain benefits and interpret liabilities.

(5) This chapter must be construed according to its terms and not liberally in favor of any party.

(6) It is the intent of the legislature that:

(a) except as provided in [sections 1 and 2] for firefighters' presumptive occupational disease claims, a stress ~~claims~~ claim, often referred to as a "mental-mental ~~claims~~ claim" ~~and~~ or a "mental-physical ~~claims~~ claim", ~~are~~ is not compensable under Montana's workers' compensation and occupational disease laws. The legislature recognizes that these claims are difficult to objectively verify and that the claims have a potential to place an economic burden on the workers' compensation and occupational disease system. The legislature also recognizes that there are other states that do not provide compensation for various categories of stress claims and that stress claims have presented economic problems for certain other jurisdictions. In addition, not all injuries are compensable under the present system, and it is within the legislature's authority to define the limits of the workers' compensation and occupational disease system. However, it is also within the legislature's authority to recognize the public service provided by firefighters and to join with other states that have extended a presumptive occupational disease recognition to firefighters.

(b) for occupational disease or presumptive occupational disease claims, because of the nature of exposure, workers should not be required to provide notice to employers of the disease as required of injuries and that the requirements for filing of claims reflect consideration of when the worker knew or should have known that the worker's condition resulted from an occupational disease or a presumptive occupational disease. The legislature recognizes that occupational diseases in the workplace are caused by events occurring on more than a single day or work shift and that ~~it is within the legislature's~~ the legislature has the authority to define an occupational disease or a presumptive occupational disease and establish the causal connection to the workplace."

Section 4. Section 39-71-124, MCA, is amended to read:

"39-71-124. Applicability of Workers' Compensation Act -- exceptions. Except as provided in 39-71-407, 39-71-601, and 39-71-603 and as specified in [section 1], this chapter applies to injuries and occupational diseases."

Section 5. Section 39-71-407, MCA, is amended to read:

"39-71-407. Liability of insurers -- limitations. (1) For workers' compensation injuries, each insurer is liable for the payment of compensation, in the manner and to the extent provided in this section, to an employee of an employer covered under plan No. 1, plan No. 2, and the state fund under plan No. 3 that it insures who receives an injury arising out of and in the course of employment or, in the case of death from the injury, to the employee's beneficiaries, if any.

(2) An injury does not arise out of and in the course of employment when the employee is:

(a) on a paid or unpaid break, is not at a worksite of the employer, and is not performing any specific tasks for the employer during the break; or

(b) engaged in a social or recreational activity, regardless of whether the employer pays for any portion of the activity. The exclusion from coverage of this subsection (2)(b) does not apply to an employee who, at the time of injury, is on paid time while participating in a social or recreational activity or whose presence at the activity is required or requested by the employer. For the purposes of this subsection (2)(b), "requested" means the employer asked the employee to assume duties for the activity so that the employee's presence is not completely voluntary and optional and the injury occurred in the performance of those duties.

(3) (a) ~~An~~ Subject to subsection (3)(c), an insurer is liable for an injury, as defined in 39-71-119, only if the injury is established by objective medical findings and if the claimant establishes that it is more probable than not that:

(i) a claimed injury has occurred; or

(ii) a claimed injury has occurred and aggravated a preexisting condition.

(b) Proof that it was medically possible that a claimed injury occurred or that the claimed injury aggravated a preexisting condition is not sufficient to establish liability.

(c) Objective medical findings are sufficient for a presumptive occupational disease as defined in [section 1] but may be overcome by ~~substantial evidence, as defined in [section 1]~~ A PREPONDERANCE OF THE EVIDENCE.

(4) (a) An employee who suffers an injury or dies while traveling is not covered by this chapter unless:

(i) the employer furnishes the transportation or the employee receives reimbursement from the employer for costs of travel, gas, oil, or lodging as a part of the employee's benefits or employment agreement and the travel is necessitated by and on behalf of the employer as an integral part or condition of the employment; or

(ii) the travel is required by the employer as part of the employee's job duties.

(b) A payment made to an employee under a collective bargaining agreement, personnel policy manual, or employee handbook or any other document provided to the employee that is not wages but is designated as an incentive to work at a particular jobsite is not a reimbursement for the costs of travel, gas, oil, or lodging, and the employee is not covered under this chapter while traveling.

(5) Except as provided in subsection (6), an employee is not eligible for benefits otherwise payable under this chapter if the employee's use of alcohol or drugs not prescribed by a physician is the major contributing cause of the accident.

(6) (a) An employee who has received written certification, as defined in 50-46-302, from a physician for the use of marijuana for a debilitating medical condition and who is otherwise eligible for benefits payable under this chapter is subject to the limitations of subsections (6)(b) through (6)(d).

(b) An employee is not eligible for benefits otherwise payable under this chapter if the employee's use of marijuana for a debilitating medical condition, as defined in 50-46-302, is the major contributing cause of the injury or occupational disease.

(c) Nothing in this chapter may be construed to require an insurer to reimburse any person for costs associated with the use of marijuana for a debilitating medical condition, as defined in 50-46-302.

(d) In an accepted liability claim, the benefits payable under this chapter may not be increased or enhanced due to a worker's use of marijuana for a debilitating medical condition, as defined in 50-46-302. An insurer remains liable for those benefits that the worker would qualify for absent the worker's use of marijuana for a debilitating medical condition.

(7) The provisions of subsection (5) do not apply if the employer had knowledge of and failed to attempt to stop the employee's use of alcohol or drugs not prescribed by a physician. This subsection (7) does not apply to the use of marijuana for a debilitating medical condition because marijuana is not a prescribed drug.

(8) If there is no dispute that an insurer is liable for an injury but there is a liability dispute between two or more insurers, the insurer for the most recently filed claim shall pay benefits until that insurer proves that another insurer is responsible for paying benefits or until another insurer agrees to pay benefits. If it is later proven that the insurer for the most recently filed claim is not responsible for paying benefits, that insurer must receive reimbursement for benefits paid to the claimant from the insurer proven to be responsible.

(9) If a claimant who has reached maximum healing suffers a subsequent nonwork-related injury to the same part of the body, the workers' compensation insurer is not liable for any compensation or medical benefits

caused by the subsequent nonwork-related injury.

(10) ~~An~~ Except for cases of presumptive occupational disease as provided in [sections 1 and 2], an employee is not eligible for benefits payable under this chapter unless the entitlement to benefits is established by objective medical findings that contain sufficient factual and historical information concerning the relationship of the worker's condition to the original injury.

(11) (a) For occupational diseases, every employer enrolled under plan No. 1, every insurer under plan No. 2, or the state fund under plan No. 3 is liable for the payment of compensation, in the manner and to the extent provided in this chapter, to an employee of an employer covered under plan No. 1, plan No. 2, or the state fund under plan No. 3 if the employee is diagnosed with a compensable occupational disease.

(b) The provisions of subsection (11)(a) apply to presumptive occupational disease if the employee is diagnosed and meets the conditions of [sections 1 and 2].

(12) An insurer is liable for an occupational disease only if the occupational disease:

(a) is established by objective medical findings; and

(b) arises out of or is contracted in the course and scope of employment. An occupational disease is considered to arise out of or be contracted in the course and scope of employment if the events occurring on more than a single day or work shift are the major contributing cause of the occupational disease in relation to other factors contributing to the occupational disease. For the purposes of this subsection (12), an occupational disease is not the same as a presumptive occupational disease.

(13) When compensation is payable for an occupational disease or a presumptive occupational disease, the only employer liable is the employer in whose employment the employee was last injuriously exposed to the hazard of the disease.

(14) When there is more than one insurer and only one employer at the time that the employee was injuriously exposed to the hazard of the disease, the liability rests with the insurer providing coverage at the earlier of:

(a) the time that the occupational disease or presumptive occupational disease was first diagnosed by a health care provider; or

(b) the time that the employee knew or should have known that the condition was the result of an occupational disease or a presumptive occupational disease.

(15) In the case of pneumoconiosis, any coal mine operator who has acquired a mine in the state or substantially all of the assets of a mine from a person who was an operator of the mine on or after December 30,

1969, is liable for and shall secure the payment of all benefits that would have been payable by that person with respect to miners previously employed in the mine if acquisition had not occurred and that person had continued to operate the mine, and the prior operator of the mine is not relieved of any liability under this section.

(16) As used in this section, "major contributing cause" means a cause that is the leading cause contributing to the result when compared to all other contributing causes."

NEW SECTION. **Section 6. Codification instruction.** [Sections 1 and 2] are intended to be codified as an integral part of Title 39, chapter 71, and the provisions of Title 39, chapter 71, apply to [sections 1 and 2].

NEW SECTION. **SECTION 7. CONTINGENT VOIDNESS.** IF A COURT FINDS ANY PART OF [THIS ACT] TO BE IN VIOLATION OF THE EQUAL PROTECTION CLAUSES OF THE U.S. OR MONTANA CONSTITUTIONS RELATING TO WORKERS' COMPENSATION CLAIMS OR A COURT APPLIES THE PRESUMPTION IN [SECTIONS 1 AND 2] TO ANOTHER CLASS OF OCCUPATION OTHER THAN FIREFIGHTERS, THEN [THIS ACT] IS VOID.

NEW SECTION. **Section 8. Effective date -- applicability.** [This act] is effective July 1, 2019, and applies to presumptive occupational diseases diagnosed on or after July 1, 2019.

- END -

SENATE BILL NO. 160

INTRODUCED BY N. MCCONNELL, K. ABBOTT, J. BACHMEIER, J. BAHR, D. BARRETT, B. BENNETT, B. BESSETTE, L. BISHOP, C. BOLAND, Z. BROWN, M. CAFERRO, J. COHENOUR, W. CURDY, K. DUDIK, M. DUNWELL, D. FERN, R. FITZGERALD, P. FLOWERS, M. FUNK, F. GARNER, J. GROSS, B. GRUBBS, J. HAMILTON, D. HARVEY, D. HAYMAN, M. HOPKINS, T. JACOBSON, J. KARJALA, K. KELKER, C. KEOGH, E. KERR-CARPENTER, R. LYNCH, M. MACDONALD, S. MALEK, M. MARLER, E. MCCLAFFERTY, M. MCNALLY, S. MORIGEAU, A. OLSEN, R. PEPPERS, Z. PERRY, G. PIERSON, J. POMNICHOWSKI, J. READ, T. RICHMOND, T. RUNNINGWOLF, M. RYAN, W. SALES, D. SANDS, C. SCHREINER, J. SESSO, R. SHAW, J. SMALL, B. SMITH, F. SMITH, S. STEWART PEREGOY, K. SULLIVAN, S. VINTON, T. WELCH, T. WINTER, T. WOODS

A BILL FOR AN ACT ENTITLED: "AN ACT ESTABLISHING THE FIREFIGHTER PROTECTION ACT BY CREATING PRESUMPTIVE COVERAGE UNDER WORKERS' COMPENSATION FOR CERTAIN DISEASES ASSOCIATED WITH FIREFIGHTING ACTIVITIES; PROVIDING CONDITIONS; PROVIDING A REBUTTAL OPTION FOR INSURERS; PROVIDING OPT-IN CHOICE FOR VOLUNTEER FIREFIGHTING ENTITIES; INCLUDING PRESUMPTIVE OCCUPATIONAL DISEASE WITHIN THE STATE'S PUBLIC POLICY PROVISIONS FOR WORKERS' COMPENSATION; PROVIDING DEFINITIONS; AMENDING SECTIONS 39-71-105, 39-71-124, AND 39-71-407, MCA; AND PROVIDING AN EFFECTIVE DATE AND AN APPLICABILITY DATE."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

NEW SECTION. **Section 1. Presumptive occupational disease for firefighters -- rebuttal -- applicability -- definitions.** (1) (a) A firefighter for whom coverage is required under the Workers' Compensation Act is presumed to have a claim for a presumptive occupational disease under the Workers' Compensation Act if the firefighter meets the requirements of [section 2] and is diagnosed with one or more of the diseases listed in subsection (2) within the period listed.

(b) Coverage under [section 2] and this section is optional for the employer of a firefighter for whom coverage under the Workers' Compensation Act is voluntary. An employer of a volunteer firefighter under 7-33-4109 or 7-33-4510 may elect as part of providing coverage under the Workers' Compensation Act to

additionally obtain the presumptive occupational disease coverage, subject to the insurer agreeing to provide presumptive coverage.

(2) The following diseases are presumptive occupational diseases proximately caused by firefighting activities, provided that the evidence of the presumptive occupational disease becomes manifest after the number of years of the firefighter's employment as listed for each occupational disease ~~or~~ AND within 10 years of the last date on which the firefighter was engaged in firefighting activities for an employer:

(a) bladder cancer after 12 years;

(b) brain cancer of any type after 10 years;

(c) breast cancer after 5 years if the diagnosis occurs before the firefighter is 40 years old and is not known to be associated with a genetic predisposition to breast cancer;

(d) cardiovascular disease after ~~4~~ 10 years;

(e) colorectal cancer after 10 years;

(e) esophageal cancer after 10 years;

(f) kidney cancer after 15 years;

(g) leukemia after 5 years;

(h) mesothelioma after 10 years;

(i) multiple myeloma after 15 years;

(j) non-Hodgkin's lymphoma after 15 years; AND

~~(k) posttraumatic stress disorder related to experiences encountered during firefighting activities; or~~

~~(l)~~(K) pulmonary or respiratory disease after 4 years.

(3) FOR PURPOSES OF CALCULATING THE NUMBER OF YEARS OF A FIREFIGHTER'S EMPLOYMENT HISTORY UNDER SUBSECTION (2), A FIREFIGHTER'S EMPLOYMENT HISTORY AFTER JULY 1, 2014, MAY BE CALCULATED.

~~(3)~~(4) The beneficiaries of a firefighter who otherwise would be eligible for presumptive occupational disease benefits under this section but who dies prior to filing a claim, as provided in [section 2], are eligible for death benefits in the same manner as for a death from an injury, as provided in 39-71-407. The beneficiaries under this subsection ~~(3)~~ (4) are similarly bound by the provisions of exclusive remedy as provided in 39-71-411 and subject to the filing requirements in 39-71-601.

~~(4)~~(5) (a) An insurer is liable for the payment of compensation for presumptive occupational disease benefits under this chapter in the same manner as provided in 39-71-407, including objective medical findings of a disease listed in subsection (2) but excluding the requirement in 39-71-407(10) that the objective medical

findings trace a relationship between the presumptive occupational disease and the claimant's job history. FOR PULMONARY OR RESPIRATORY DISEASES UNDER SUBSECTION (2), THE DISEASES MUST BE THE TYPE THAT CAN REASONABLY BE CAUSED BY FIREFIGHTING ACTIVITIES.

(b) An insurer under plan 1, 2, or 3 that disputes a presumptive occupational disease claim has the burden of proof in establishing by ~~substantial~~ A PREPONDERANCE OF THE evidence that the firefighter is not suffering from a compensable presumptive occupational disease. An insurer that disputes the claim may pay benefits under 39-71-608 or 39-71-615 and may pursue dispute mechanisms established in Title 39, chapter 71, part 24. NOTHING IN THIS SECTION LIMITS AN INSURER'S ABILITY TO ASSERT THAT THE OCCUPATIONAL DISEASE WAS NOT CAUSED BY THE FIREFIGHTER'S EMPLOYMENT HISTORY AS A FIREFIGHTER.

(c) A firefighter or the firefighter's beneficiaries may pursue the dispute remedies as provided in Title 39, chapter 71, part 24, if an insurer disputes a claim.

~~(5)~~(6) The use of the term "occupational disease" includes a presumptive occupational disease when used in the definitions in 39-71-116 for "claims examiner", "permanent partial disability", "primary medical services", and "treating physician" and when used in 39-71-107, 39-71-307, 39-71-412, 39-71-503, 39-71-601, 39-71-604, 39-71-606, 39-71-615, 39-71-703, 39-71-704, 39-71-713, 39-71-714, 39-71-717, 39-71-1011, 39-71-1036, 39-71-1041, 39-71-1042, 39-71-1101, 39-71-1110, 39-71-1504, 39-71-2311, 39-71-2312, 39-71-2313, 39-71-2316, and 39-71-4003.

(7) [SECTION 2] AND THIS SECTION:

(A) APPLY ONLY TO PRESUMPTIVE OCCUPATIONAL DISEASES FOR FIREFIGHTERS; AND

(B) DO NOT APPLY TO ANY OTHER ISSUE RELATING TO WORKERS' COMPENSATION AND MAY NOT BE USED OR CITED AS GUIDANCE IN THE ADMINISTRATION OF TITLE 33 OR 37.

~~(6)~~(8) For the purposes of [section 2] and this section, the following definitions apply:

(a) "Firefighter" means an individual whose primary duties involve extinguishing or investigating fires, WITH AT LEAST 1 YEAR OF FIREFIGHTING OPERATIONS IN MONTANA BEGINNING ON OR AFTER JULY 1, 2019, as:

(i) a firefighter defined in 19-13-104;

(ii) a volunteer firefighter defined in 7-33-4510, but only if the volunteer firefighter's employer has elected coverage under Title 39, chapter 71, with an insurer that allows an election and the employer has opted separately to include presumptive occupational disease coverage under [section 2] and this section; or

(iii) a volunteer described in 7-33-4109 for a firefighting entity that has elected coverage under Title 39, chapter 71, with an insurer that allows an election and that has opted separately to include presumptive

occupational disease coverage.

(b) "Firefighting activities" means actions required of a firefighter that expose the firefighter to extreme heat or inhalation or physical exposure to chemical fumes, smoke, particles, or other toxic gases arising directly out of employment as a firefighter.

~~(c) "Posttraumatic stress disorder" has the meaning provided in the American psychiatric association's fifth edition of its Diagnostic and Statistical Manual of Mental Disorders.~~

~~(d)~~(c) "Presumptive occupational disease" means harm or damage from one or more of the diseases listed under subsection (2) that is established by objective medical findings and that is contracted in the course and scope of employment as a firefighter from either a single day or work shift or for more than a single day or work shift but that is not specific to an accident. ~~The term may include a physical or mental condition arising from posttraumatic stress disorder associated with firefighting activities.~~

~~(e) "Substantial evidence" means:~~

~~(i) the conditions of [section 2] have not been met; or~~

~~(ii) the presumptive occupational disease occurred without the firefighter having had firefighting duties that involved close proximity to fires and smoke or did not have exposure to smoke or particles in sufficient quantities to have reasonably caused a presumptive occupational disease.~~

NEW SECTION. **Section 2. Conditions for claiming presumptive occupational disease.** (1) Except as provided in subsection (4), the following must be satisfied for the presumption in [section 1] to apply:

(a) the firefighter must timely file a claim for a presumptive occupational disease under Title 39, chapter 71, as soon as the firefighter knows or should have known that the firefighter's condition resulted from a presumptive occupational disease; and

(b) (i) the firefighter must have undergone, within 90 days of hiring, a medical examination that did not reveal ~~substantial~~ OBJECTIVE MEDICAL evidence of the presumptive occupational disease for which the presumption under [section 1] is sought; and

(ii) the firefighter must have undergone subsequent periodic medical examinations at least once every 2 years.

(2) (a) Subsection (1)(b) does not require the employer of a firefighter to provide or pay for a medical examination, either at the time of hiring or during the subsequent term of employment.

(b) If the employer of a firefighter does not provide or pay for a medical examination under subsection

(1)(b), the firefighter may satisfy the requirements of subsection (1)(b) by obtaining the medical examination at the firefighter's expense or at the expense of another party.

(3) To qualify for a ~~noncancer respiratory~~ presumptive occupational disease, a firefighter may not:

(a) be a regular user of tobacco products;

(b) have a history of regular tobacco use in the ~~5~~ 10 years preceding the filing of the claim under subsection (1)(a); or

(c) have been exposed by a cohabitant who regularly and habitually used tobacco products within the home for a period of 10 or more years prior to the diagnosis.

(4) A firefighter who, prior to [the effective date of this act], did not receive a medical examination as frequently as the intervals set forth in subsection (1)(b) is not ineligible on that basis for a presumptive occupational disease claim under [section 1] and this section.

Section 3. Section 39-71-105, MCA, is amended to read:

"39-71-105. Declaration of public policy. For the purposes of interpreting and applying this chapter, the following is the public policy of this state:

(1) An objective of the Montana workers' compensation system is to provide, without regard to fault, wage-loss and medical benefits to a worker suffering from a work-related injury or disease. Wage-loss benefits are not intended to make an injured worker whole but are intended to provide assistance to a worker at a reasonable cost to the employer. Within that limitation, the wage-loss benefit should bear a reasonable relationship to actual wages lost as a result of a work-related injury or disease.

(2) It is the intent of the legislature to assert that a conclusive presumption exists that recognizes that a holder of a current, valid independent contractor exemption certificate issued by the department is an independent contractor if the person is working under the independent contractor exemption certificate. The holder of an independent contractor exemption certificate waives the rights, benefits, and obligations of this chapter unless the person has elected to be bound personally and individually by the provisions of compensation plan No. 1, 2, or 3.

(3) A worker's removal from the workforce because of a work-related injury or disease has a negative impact on the worker, the worker's family, the employer, and the general public. Therefore, an objective of the workers' compensation system is to return a worker to work as soon as possible after the worker has suffered a work-related injury or disease.

(4) Montana's workers' compensation and occupational disease insurance systems are intended to be primarily self-administering. Claimants should be able to speedily obtain benefits, and employers should be able to provide coverage at reasonably constant rates. To meet these objectives, the system must be designed to minimize reliance upon lawyers and the courts to obtain benefits and interpret liabilities.

(5) This chapter must be construed according to its terms and not liberally in favor of any party.

(6) It is the intent of the legislature that:

(a) ~~except as provided in [sections 1 and 2] for firefighters' presumptive occupational disease claims,~~ a stress ~~claims~~ claim, often referred to as a "mental-mental ~~claims~~ claim" ~~and~~ or a "mental-physical ~~claims~~ claim", ~~are~~ is not compensable under Montana's workers' compensation and occupational disease laws. The legislature recognizes that these claims are difficult to objectively verify and that the claims have a potential to place an economic burden on the workers' compensation and occupational disease system. The legislature also recognizes that there are other states that do not provide compensation for various categories of stress claims and that stress claims have presented economic problems for certain other jurisdictions. In addition, not all injuries are compensable under the present system, and it is within the legislature's authority to define the limits of the workers' compensation and occupational disease system. However, it is also within the legislature's authority to recognize the public service provided by firefighters and to join with other states that have extended a presumptive occupational disease recognition to firefighters.

(b) for occupational disease or presumptive occupational disease claims, because of the nature of exposure, workers should not be required to provide notice to employers of the disease as required of injuries and that the requirements for filing of claims reflect consideration of when the worker knew or should have known that the worker's condition resulted from an occupational disease or a presumptive occupational disease. The legislature recognizes that occupational diseases in the workplace are caused by events occurring on more than a single day or work shift and that ~~it is within the legislature's~~ the legislature has the authority to define an occupational disease or a presumptive occupational disease and establish the causal connection to the workplace."

Section 4. Section 39-71-124, MCA, is amended to read:

"39-71-124. Applicability of Workers' Compensation Act -- exceptions. Except as provided in 39-71-407, 39-71-601, and 39-71-603 and as specified in [section 1], this chapter applies to injuries and occupational diseases."

Section 5. Section 39-71-407, MCA, is amended to read:

"39-71-407. Liability of insurers -- limitations. (1) For workers' compensation injuries, each insurer is liable for the payment of compensation, in the manner and to the extent provided in this section, to an employee of an employer covered under plan No. 1, plan No. 2, and the state fund under plan No. 3 that it insures who receives an injury arising out of and in the course of employment or, in the case of death from the injury, to the employee's beneficiaries, if any.

(2) An injury does not arise out of and in the course of employment when the employee is:

(a) on a paid or unpaid break, is not at a worksite of the employer, and is not performing any specific tasks for the employer during the break; or

(b) engaged in a social or recreational activity, regardless of whether the employer pays for any portion of the activity. The exclusion from coverage of this subsection (2)(b) does not apply to an employee who, at the time of injury, is on paid time while participating in a social or recreational activity or whose presence at the activity is required or requested by the employer. For the purposes of this subsection (2)(b), "requested" means the employer asked the employee to assume duties for the activity so that the employee's presence is not completely voluntary and optional and the injury occurred in the performance of those duties.

(3) (a) ~~An~~ Subject to subsection (3)(c), an insurer is liable for an injury, as defined in 39-71-119, only if the injury is established by objective medical findings and if the claimant establishes that it is more probable than not that:

(i) a claimed injury has occurred; or

(ii) a claimed injury has occurred and aggravated a preexisting condition.

(b) Proof that it was medically possible that a claimed injury occurred or that the claimed injury aggravated a preexisting condition is not sufficient to establish liability.

(c) Objective medical findings are sufficient for a presumptive occupational disease as defined in [section 1] but may be overcome by ~~substantial evidence, as defined in [section 1]~~ A PREPONDERANCE OF THE EVIDENCE.

(4) (a) An employee who suffers an injury or dies while traveling is not covered by this chapter unless:

(i) the employer furnishes the transportation or the employee receives reimbursement from the employer for costs of travel, gas, oil, or lodging as a part of the employee's benefits or employment agreement and the travel is necessitated by and on behalf of the employer as an integral part or condition of the employment; or

(ii) the travel is required by the employer as part of the employee's job duties.

(b) A payment made to an employee under a collective bargaining agreement, personnel policy manual, or employee handbook or any other document provided to the employee that is not wages but is designated as an incentive to work at a particular jobsite is not a reimbursement for the costs of travel, gas, oil, or lodging, and the employee is not covered under this chapter while traveling.

(5) Except as provided in subsection (6), an employee is not eligible for benefits otherwise payable under this chapter if the employee's use of alcohol or drugs not prescribed by a physician is the major contributing cause of the accident.

(6) (a) An employee who has received written certification, as defined in 50-46-302, from a physician for the use of marijuana for a debilitating medical condition and who is otherwise eligible for benefits payable under this chapter is subject to the limitations of subsections (6)(b) through (6)(d).

(b) An employee is not eligible for benefits otherwise payable under this chapter if the employee's use of marijuana for a debilitating medical condition, as defined in 50-46-302, is the major contributing cause of the injury or occupational disease.

(c) Nothing in this chapter may be construed to require an insurer to reimburse any person for costs associated with the use of marijuana for a debilitating medical condition, as defined in 50-46-302.

(d) In an accepted liability claim, the benefits payable under this chapter may not be increased or enhanced due to a worker's use of marijuana for a debilitating medical condition, as defined in 50-46-302. An insurer remains liable for those benefits that the worker would qualify for absent the worker's use of marijuana for a debilitating medical condition.

(7) The provisions of subsection (5) do not apply if the employer had knowledge of and failed to attempt to stop the employee's use of alcohol or drugs not prescribed by a physician. This subsection (7) does not apply to the use of marijuana for a debilitating medical condition because marijuana is not a prescribed drug.

(8) If there is no dispute that an insurer is liable for an injury but there is a liability dispute between two or more insurers, the insurer for the most recently filed claim shall pay benefits until that insurer proves that another insurer is responsible for paying benefits or until another insurer agrees to pay benefits. If it is later proven that the insurer for the most recently filed claim is not responsible for paying benefits, that insurer must receive reimbursement for benefits paid to the claimant from the insurer proven to be responsible.

(9) If a claimant who has reached maximum healing suffers a subsequent nonwork-related injury to the same part of the body, the workers' compensation insurer is not liable for any compensation or medical benefits

caused by the subsequent nonwork-related injury.

(10) ~~An~~ Except for cases of presumptive occupational disease as provided in [sections 1 and 2], an employee is not eligible for benefits payable under this chapter unless the entitlement to benefits is established by objective medical findings that contain sufficient factual and historical information concerning the relationship of the worker's condition to the original injury.

(11) (a) For occupational diseases, every employer enrolled under plan No. 1, every insurer under plan No. 2, or the state fund under plan No. 3 is liable for the payment of compensation, in the manner and to the extent provided in this chapter, to an employee of an employer covered under plan No. 1, plan No. 2, or the state fund under plan No. 3 if the employee is diagnosed with a compensable occupational disease.

(b) The provisions of subsection (11)(a) apply to presumptive occupational disease if the employee is diagnosed and meets the conditions of [sections 1 and 2].

(12) An insurer is liable for an occupational disease only if the occupational disease:

(a) is established by objective medical findings; and

(b) arises out of or is contracted in the course and scope of employment. An occupational disease is considered to arise out of or be contracted in the course and scope of employment if the events occurring on more than a single day or work shift are the major contributing cause of the occupational disease in relation to other factors contributing to the occupational disease. For the purposes of this subsection (12), an occupational disease is not the same as a presumptive occupational disease.

(13) When compensation is payable for an occupational disease or a presumptive occupational disease, the only employer liable is the employer in whose employment the employee was last injuriously exposed to the hazard of the disease.

(14) When there is more than one insurer and only one employer at the time that the employee was injuriously exposed to the hazard of the disease, the liability rests with the insurer providing coverage at the earlier of:

(a) the time that the occupational disease or presumptive occupational disease was first diagnosed by a health care provider; or

(b) the time that the employee knew or should have known that the condition was the result of an occupational disease or a presumptive occupational disease.

(15) In the case of pneumoconiosis, any coal mine operator who has acquired a mine in the state or substantially all of the assets of a mine from a person who was an operator of the mine on or after December 30,

1969, is liable for and shall secure the payment of all benefits that would have been payable by that person with respect to miners previously employed in the mine if acquisition had not occurred and that person had continued to operate the mine, and the prior operator of the mine is not relieved of any liability under this section.

(16) As used in this section, "major contributing cause" means a cause that is the leading cause contributing to the result when compared to all other contributing causes."

NEW SECTION. **Section 6. Codification instruction.** [Sections 1 and 2] are intended to be codified as an integral part of Title 39, chapter 71, and the provisions of Title 39, chapter 71, apply to [sections 1 and 2].

NEW SECTION. **SECTION 7. CONTINGENT VOIDNESS.** IF A COURT FINDS ANY PART OF [THIS ACT] TO BE IN VIOLATION OF THE EQUAL PROTECTION CLAUSES OF THE U.S. OR MONTANA CONSTITUTIONS RELATING TO WORKERS' COMPENSATION CLAIMS OR A COURT APPLIES THE PRESUMPTION IN [SECTIONS 1 AND 2] TO ANOTHER CLASS OF OCCUPATION OTHER THAN FIREFIGHTERS, THEN [THIS ACT] IS VOID.

NEW SECTION. **Section 8. Effective date -- applicability.** [This act] is effective July 1, 2019, and applies to presumptive occupational diseases diagnosed on or after July 1, 2019.

- END -

SENATE BILL NO. 160

INTRODUCED BY N. MCCONNELL, K. ABBOTT, J. BACHMEIER, J. BAHR, D. BARRETT, B. BENNETT, B. BESSETTE, L. BISHOP, C. BOLAND, Z. BROWN, M. CAFERRO, J. COHENOUR, W. CURDY, K. DUDIK, M. DUNWELL, D. FERN, R. FITZGERALD, P. FLOWERS, M. FUNK, F. GARNER, J. GROSS, B. GRUBBS, J. HAMILTON, D. HARVEY, D. HAYMAN, M. HOPKINS, T. JACOBSON, J. KARJALA, K. KELKER, C. KEOGH, E. KERR-CARPENTER, R. LYNCH, M. MACDONALD, S. MALEK, M. MARLER, E. MCCLAFFERTY, M. MCNALLY, S. MORIGEAU, A. OLSEN, R. PEPPERS, Z. PERRY, G. PIERSON, J. POMNICHOWSKI, J. READ, T. RICHMOND, T. RUNNINGWOLF, M. RYAN, W. SALES, D. SANDS, C. SCHREINER, J. SESSO, R. SHAW, J. SMALL, B. SMITH, F. SMITH, S. STEWART PEREGOY, K. SULLIVAN, S. VINTON, T. WELCH, T. WINTER, T. WOODS

A BILL FOR AN ACT ENTITLED: "AN ACT ESTABLISHING THE FIREFIGHTER PROTECTION ACT BY CREATING PRESUMPTIVE COVERAGE UNDER WORKERS' COMPENSATION FOR CERTAIN DISEASES ASSOCIATED WITH FIREFIGHTING ACTIVITIES; PROVIDING CONDITIONS; PROVIDING A REBUTTAL OPTION FOR INSURERS; PROVIDING OPT-IN CHOICE FOR VOLUNTEER FIREFIGHTING ENTITIES; INCLUDING PRESUMPTIVE OCCUPATIONAL DISEASE WITHIN THE STATE'S PUBLIC POLICY PROVISIONS FOR WORKERS' COMPENSATION; PROVIDING DEFINITIONS; AMENDING SECTIONS 39-71-105, 39-71-124, AND 39-71-407, MCA; AND PROVIDING AN EFFECTIVE DATE AND AN APPLICABILITY DATE."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

NEW SECTION. **Section 1. Presumptive occupational disease for firefighters -- rebuttal -- applicability -- definitions.** (1) (a) A firefighter for whom coverage is required under the Workers' Compensation Act is presumed to have a claim for a presumptive occupational disease under the Workers' Compensation Act if the firefighter meets the requirements of [section 2] and is diagnosed with one or more of the diseases listed in subsection (2) within the period listed.

(b) Coverage under [section 2] and this section is optional for the employer of a firefighter for whom coverage under the Workers' Compensation Act is voluntary. An employer of a volunteer firefighter under 7-33-4109 or 7-33-4510 may elect as part of providing coverage under the Workers' Compensation Act to

additionally obtain the presumptive occupational disease coverage, subject to the insurer agreeing to provide presumptive coverage.

(2) The following diseases are presumptive occupational diseases proximately caused by firefighting activities, provided that the evidence of the presumptive occupational disease becomes manifest after the number of years of the firefighter's employment as listed for each occupational disease ~~or~~ AND within 10 years of the last date on which the firefighter was engaged in firefighting activities for an employer:

(a) bladder cancer after 12 years;

(b) brain cancer of any type after 10 years;

(c) breast cancer after 5 years if the diagnosis occurs before the firefighter is 40 years old and is not known to be associated with a genetic predisposition to breast cancer;

(d) ~~cardiovascular disease~~ MYOCARDIAL INFARCTION after ~~4~~ 10 years;

(e) colorectal cancer after 10 years;

(e) esophageal cancer after 10 years;

(f) kidney cancer after 15 years;

(g) leukemia after 5 years;

(h) mesothelioma OR ASBESTOSIS after 10 years;

(i) multiple myeloma after 15 years;

(j) non-Hodgkin's lymphoma after 15 years; AND

~~(k) posttraumatic stress disorder related to experiences encountered during firefighting activities; or~~

~~(l)~~(K) ~~pulmonary or respiratory disease~~ LUNG CANCER after 4 years.

(3) FOR PURPOSES OF CALCULATING THE NUMBER OF YEARS OF A FIREFIGHTER'S EMPLOYMENT HISTORY UNDER SUBSECTION (2), A FIREFIGHTER'S EMPLOYMENT HISTORY AFTER JULY 1, 2014, MAY BE CALCULATED.

~~(3)~~(4) The beneficiaries of a firefighter who otherwise would be eligible for presumptive occupational disease benefits under this section but who dies prior to filing a claim, as provided in [section 2], are eligible for death benefits in the same manner as for a death from an injury, as provided in 39-71-407. The beneficiaries under this subsection ~~(3)~~ (4) are similarly bound by the provisions of exclusive remedy as provided in 39-71-411 and subject to the filing requirements in 39-71-601.

~~(4)~~(5) (a) ~~An~~ SUBJECT TO THE PROVISIONS OF SUBSECTION (5)(C), AN insurer is liable for the payment of compensation for presumptive occupational disease benefits under this chapter in the same manner as provided in 39-71-407, including objective medical findings of a disease listed in subsection (2) but excluding the

requirement in 39-71-407(10) that the objective medical findings trace a relationship between the presumptive occupational disease and the claimant's job history. FOR ~~PULMONARY OR RESPIRATORY DISEASES~~ MYOCARDIAL INFARCTION OR LUNG CANCER UNDER SUBSECTION (2), THE DISEASES MUST BE THE TYPE THAT CAN REASONABLY BE CAUSED BY FIREFIGHTING ACTIVITIES.

(b) (I) An insurer under plan 1, 2, or 3 that disputes a presumptive occupational disease claim has the burden of proof in establishing by ~~substantial~~ A PREPONDERANCE OF THE evidence that the firefighter is not suffering from a compensable presumptive occupational disease. An insurer that disputes the claim may pay benefits under 39-71-608 or 39-71-615 and may pursue dispute mechanisms established in Title 39, chapter 71, part 24. ~~NOTHING IN THIS SECTION LIMITS~~

(II) AN INSURER IS NOT LIABLE FOR THE PAYMENT OF WORKERS' COMPENSATION BENEFITS FOR PRESUMPTIVE OCCUPATIONAL DISEASE IF THE INSURER ESTABLISHES BY A PREPONDERANCE OF THE EVIDENCE THAT THE FIREFIGHTER WAS NOT EXPOSED DURING THE COURSE AND SCOPE OF THE FIREFIGHTER'S DUTIES TO SMOKE OR PARTICLES IN A QUANTITY SUFFICIENT TO HAVE REASONABLY CAUSED THE DISEASE CLAIMED.

(C) A TOTAL CLAIM PAYMENT BY AN INSURER UNDER THIS SECTION IS LIMITED TO $5 MILLION FOR EACH CLAIM.

(6) THIS SECTION DOES NOT LIMIT AN INSURER'S ABILITY TO ASSERT THAT THE OCCUPATIONAL DISEASE WAS NOT CAUSED BY THE FIREFIGHTER'S EMPLOYMENT HISTORY AS A FIREFIGHTER.

~~(c)~~(7) A firefighter or the firefighter's beneficiaries may pursue the dispute remedies as provided in Title 39, chapter 71, part 24, if an insurer disputes a claim.

~~(5)~~~~(6)~~(8) The use of the term "occupational disease" includes a presumptive occupational disease when used in the definitions in 39-71-116 for "claims examiner", "permanent partial disability", "primary medical services", and "treating physician" and when used in 39-71-107, 39-71-307, 39-71-412, 39-71-503, 39-71-601, 39-71-604, 39-71-606, 39-71-615, 39-71-703, 39-71-704, 39-71-713, 39-71-714, 39-71-717, 39-71-1011, 39-71-1036, 39-71-1041, 39-71-1042, 39-71-1101, 39-71-1110, 39-71-1504, 39-71-2311, 39-71-2312, 39-71-2313, 39-71-2316, and 39-71-4003.

~~(7)~~(9) [SECTION 2] AND THIS SECTION:

(A) APPLY ONLY TO PRESUMPTIVE OCCUPATIONAL DISEASES FOR FIREFIGHTERS; AND

(B) DO NOT APPLY TO ANY OTHER ISSUE RELATING TO WORKERS' COMPENSATION AND MAY NOT BE USED OR CITED AS GUIDANCE IN THE ADMINISTRATION OF TITLE 33 OR 37.

~~(6)~~~~(8)~~(10) For the purposes of [section 2] and this section, the following definitions apply:

(a) "Firefighter" means an individual whose primary duties involve extinguishing or investigating fires,

WITH AT LEAST 1 YEAR OF FIREFIGHTING OPERATIONS IN MONTANA BEGINNING ON OR AFTER JULY 1, 2019, as:

(i) a firefighter defined in 19-13-104;

(ii) a volunteer firefighter defined in 7-33-4510, but only if the volunteer firefighter's employer has elected coverage under Title 39, chapter 71, with an insurer that allows an election and the employer has opted separately to include presumptive occupational disease coverage under [section 2] and this section; or

(iii) a volunteer described in 7-33-4109 for a firefighting entity that has elected coverage under Title 39, chapter 71, with an insurer that allows an election and that has opted separately to include presumptive occupational disease coverage.

(b) "Firefighting activities" means actions required of a firefighter that expose the firefighter to extreme heat or inhalation or physical exposure to chemical fumes, smoke, particles, or other toxic gases arising directly out of employment as a firefighter.

~~(c) "Posttraumatic stress disorder" has the meaning provided in the American psychiatric association's fifth edition of its Diagnostic and Statistical Manual of Mental Disorders.~~

~~(d)~~(C) "Presumptive occupational disease" means harm or damage from one or more of the diseases listed under subsection (2) that is established by objective medical findings and that is contracted in the course and scope of employment as a firefighter from either a single day or work shift or for more than a single day or work shift but that is not specific to an accident. ~~The term may include a physical or mental condition arising from posttraumatic stress disorder associated with firefighting activities.~~

~~(e) "Substantial evidence" means:~~

~~(i) the conditions of [section 2] have not been met; or~~

~~(ii) the presumptive occupational disease occurred without the firefighter having had firefighting duties that involved close proximity to fires and smoke or did not have exposure to smoke or particles in sufficient quantities to have reasonably caused a presumptive occupational disease.~~

NEW SECTION. **Section 2. Conditions for claiming presumptive occupational disease.** (1) Except as provided in subsection (4), the following must be satisfied for the presumption in [section 1] to apply:

(a) the firefighter must timely file a claim for a presumptive occupational disease under Title 39, chapter 71, as soon as the firefighter knows or should have known that the firefighter's condition resulted from a presumptive occupational disease; and

(b) (i) the firefighter must have undergone, within 90 days of hiring, a medical examination that did not

reveal ~~substantial~~ OBJECTIVE MEDICAL evidence OR A FAMILY HISTORY of the presumptive occupational disease for which the presumption under [section 1] is sought; and

(ii) the firefighter must have undergone subsequent periodic medical examinations at least once every 2 years.

(2) (a) Subsection (1)(b) does not require the employer of a firefighter to provide or pay for a medical examination, either at the time of hiring or during the subsequent term of employment.

(b) If the employer of a firefighter does not provide or pay for a medical examination under subsection (1)(b), the firefighter may satisfy the requirements of subsection (1)(b) by obtaining the medical examination at the firefighter's expense or at the expense of another party.

(3) To qualify for a ~~noncancer respiratory~~ presumptive occupational disease, a firefighter may not:

(a) be a regular user of tobacco products;

(b) have a history of regular tobacco use in the ~~5~~ 10 years preceding the filing of the claim under subsection (1)(a); or

(c) have been exposed by a cohabitant who regularly and habitually used tobacco products within the home for a period of 10 or more years prior to the diagnosis.

(4) A firefighter who, prior to [the effective date of this act], did not receive a medical examination as frequently as the intervals set forth in subsection (1)(b) is not ineligible on that basis for a presumptive occupational disease claim under [section 1] and this section.

Section 3. Section 39-71-105, MCA, is amended to read:

"39-71-105. Declaration of public policy. For the purposes of interpreting and applying this chapter, the following is the public policy of this state:

(1) An objective of the Montana workers' compensation system is to provide, without regard to fault, wage-loss and medical benefits to a worker suffering from a work-related injury or disease. Wage-loss benefits are not intended to make an injured worker whole but are intended to provide assistance to a worker at a reasonable cost to the employer. Within that limitation, the wage-loss benefit should bear a reasonable relationship to actual wages lost as a result of a work-related injury or disease.

(2) It is the intent of the legislature to assert that a conclusive presumption exists that recognizes that a holder of a current, valid independent contractor exemption certificate issued by the department is an independent contractor if the person is working under the independent contractor exemption certificate. The

holder of an independent contractor exemption certificate waives the rights, benefits, and obligations of this chapter unless the person has elected to be bound personally and individually by the provisions of compensation plan No. 1, 2, or 3.

(3) A worker's removal from the workforce because of a work-related injury or disease has a negative impact on the worker, the worker's family, the employer, and the general public. Therefore, an objective of the workers' compensation system is to return a worker to work as soon as possible after the worker has suffered a work-related injury or disease.

(4) Montana's workers' compensation and occupational disease insurance systems are intended to be primarily self-administering. Claimants should be able to speedily obtain benefits, and employers should be able to provide coverage at reasonably constant rates. To meet these objectives, the system must be designed to minimize reliance upon lawyers and the courts to obtain benefits and interpret liabilities.

(5) This chapter must be construed according to its terms and not liberally in favor of any party.

(6) It is the intent of the legislature that:

(a) ~~except as provided in [sections 1 and 2] for firefighters' presumptive occupational disease claims,~~ a stress ~~claims~~ claim, often referred to as a "mental-mental ~~claims~~ claim" ~~and~~ or a "mental-physical ~~claims~~ claim", ~~are~~ is not compensable under Montana's workers' compensation and occupational disease laws. The legislature recognizes that these claims are difficult to objectively verify and that the claims have a potential to place an economic burden on the workers' compensation and occupational disease system. The legislature also recognizes that there are other states that do not provide compensation for various categories of stress claims and that stress claims have presented economic problems for certain other jurisdictions. In addition, not all injuries are compensable under the present system, and it is within the legislature's authority to define the limits of the workers' compensation and occupational disease system. However, it is also within the legislature's authority to recognize the public service provided by firefighters and to join with other states that have extended a presumptive occupational disease recognition to firefighters.

(b) for occupational disease or presumptive occupational disease claims, because of the nature of exposure, workers should not be required to provide notice to employers of the disease as required of injuries and that the requirements for filing of claims reflect consideration of when the worker knew or should have known that the worker's condition resulted from an occupational disease or a presumptive occupational disease. The legislature recognizes that occupational diseases in the workplace are caused by events occurring on more than a single day or work shift and that ~~it is within the legislature's~~ the legislature has the authority to define an

occupational disease or a presumptive occupational disease and establish the causal connection to the workplace."

Section 4. Section 39-71-124, MCA, is amended to read:

"39-71-124. Applicability of Workers' Compensation Act -- exceptions. Except as provided in 39-71-407, 39-71-601, and 39-71-603 and as specified in [section 1], this chapter applies to injuries and occupational diseases."

Section 5. Section 39-71-407, MCA, is amended to read:

"39-71-407. Liability of insurers -- limitations. (1) For workers' compensation injuries, each insurer is liable for the payment of compensation, in the manner and to the extent provided in this section, to an employee of an employer covered under plan No. 1, plan No. 2, and the state fund under plan No. 3 that it insures who receives an injury arising out of and in the course of employment or, in the case of death from the injury, to the employee's beneficiaries, if any.

(2) An injury does not arise out of and in the course of employment when the employee is:

(a) on a paid or unpaid break, is not at a worksite of the employer, and is not performing any specific tasks for the employer during the break; or

(b) engaged in a social or recreational activity, regardless of whether the employer pays for any portion of the activity. The exclusion from coverage of this subsection (2)(b) does not apply to an employee who, at the time of injury, is on paid time while participating in a social or recreational activity or whose presence at the activity is required or requested by the employer. For the purposes of this subsection (2)(b), "requested" means the employer asked the employee to assume duties for the activity so that the employee's presence is not completely voluntary and optional and the injury occurred in the performance of those duties.

(3) (a) ~~An~~ Subject to subsection (3)(c), an insurer is liable for an injury, as defined in 39-71-119, only if the injury is established by objective medical findings and if the claimant establishes that it is more probable than not that:

(i) a claimed injury has occurred; or

(ii) a claimed injury has occurred and aggravated a preexisting condition.

(b) Proof that it was medically possible that a claimed injury occurred or that the claimed injury aggravated a preexisting condition is not sufficient to establish liability.

(c) Objective medical findings are sufficient for a presumptive occupational disease as defined in [section 1] but may be overcome by ~~substantial evidence, as defined in [section 1]~~ A PREPONDERANCE OF THE EVIDENCE.

(4) (a) An employee who suffers an injury or dies while traveling is not covered by this chapter unless:

(i) the employer furnishes the transportation or the employee receives reimbursement from the employer for costs of travel, gas, oil, or lodging as a part of the employee's benefits or employment agreement and the travel is necessitated by and on behalf of the employer as an integral part or condition of the employment; or

(ii) the travel is required by the employer as part of the employee's job duties.

(b) A payment made to an employee under a collective bargaining agreement, personnel policy manual, or employee handbook or any other document provided to the employee that is not wages but is designated as an incentive to work at a particular jobsite is not a reimbursement for the costs of travel, gas, oil, or lodging, and the employee is not covered under this chapter while traveling.

(5) Except as provided in subsection (6), an employee is not eligible for benefits otherwise payable under this chapter if the employee's use of alcohol or drugs not prescribed by a physician is the major contributing cause of the accident.

(6) (a) An employee who has received written certification, as defined in 50-46-302, from a physician for the use of marijuana for a debilitating medical condition and who is otherwise eligible for benefits payable under this chapter is subject to the limitations of subsections (6)(b) through (6)(d).

(b) An employee is not eligible for benefits otherwise payable under this chapter if the employee's use of marijuana for a debilitating medical condition, as defined in 50-46-302, is the major contributing cause of the injury or occupational disease.

(c) Nothing in this chapter may be construed to require an insurer to reimburse any person for costs associated with the use of marijuana for a debilitating medical condition, as defined in 50-46-302.

(d) In an accepted liability claim, the benefits payable under this chapter may not be increased or enhanced due to a worker's use of marijuana for a debilitating medical condition, as defined in 50-46-302. An insurer remains liable for those benefits that the worker would qualify for absent the worker's use of marijuana for a debilitating medical condition.

(7) The provisions of subsection (5) do not apply if the employer had knowledge of and failed to attempt to stop the employee's use of alcohol or drugs not prescribed by a physician. This subsection (7) does not apply to the use of marijuana for a debilitating medical condition because marijuana is not a prescribed drug.

(8) If there is no dispute that an insurer is liable for an injury but there is a liability dispute between two or more insurers, the insurer for the most recently filed claim shall pay benefits until that insurer proves that another insurer is responsible for paying benefits or until another insurer agrees to pay benefits. If it is later proven that the insurer for the most recently filed claim is not responsible for paying benefits, that insurer must receive reimbursement for benefits paid to the claimant from the insurer proven to be responsible.

(9) If a claimant who has reached maximum healing suffers a subsequent nonwork-related injury to the same part of the body, the workers' compensation insurer is not liable for any compensation or medical benefits caused by the subsequent nonwork-related injury.

(10) ~~An~~ Except for cases of presumptive occupational disease as provided in [sections 1 and 2], an employee is not eligible for benefits payable under this chapter unless the entitlement to benefits is established by objective medical findings that contain sufficient factual and historical information concerning the relationship of the worker's condition to the original injury.

(11) (a) For occupational diseases, every employer enrolled under plan No. 1, every insurer under plan No. 2, or the state fund under plan No. 3 is liable for the payment of compensation, in the manner and to the extent provided in this chapter, to an employee of an employer covered under plan No. 1, plan No. 2, or the state fund under plan No. 3 if the employee is diagnosed with a compensable occupational disease.

(b) The provisions of subsection (11)(a) apply to presumptive occupational disease if the employee is diagnosed and meets the conditions of [sections 1 and 2].

(12) An insurer is liable for an occupational disease only if the occupational disease:

(a) is established by objective medical findings; and

(b) arises out of or is contracted in the course and scope of employment. An occupational disease is considered to arise out of or be contracted in the course and scope of employment if the events occurring on more than a single day or work shift are the major contributing cause of the occupational disease in relation to other factors contributing to the occupational disease. For the purposes of this subsection (12), an occupational disease is not the same as a presumptive occupational disease.

(13) When compensation is payable for an occupational disease or a presumptive occupational disease, the only employer liable is the employer in whose employment the employee was last injuriously exposed to the hazard of the disease.

(14) When there is more than one insurer and only one employer at the time that the employee was injuriously exposed to the hazard of the disease, the liability rests with the insurer providing coverage at the

earlier of:

(a) the time that the occupational disease or presumptive occupational disease was first diagnosed by a health care provider; or

(b) the time that the employee knew or should have known that the condition was the result of an occupational disease or a presumptive occupational disease.

(15) In the case of pneumoconiosis, any coal mine operator who has acquired a mine in the state or substantially all of the assets of a mine from a person who was an operator of the mine on or after December 30, 1969, is liable for and shall secure the payment of all benefits that would have been payable by that person with respect to miners previously employed in the mine if acquisition had not occurred and that person had continued to operate the mine, and the prior operator of the mine is not relieved of any liability under this section.

(16) As used in this section, "major contributing cause" means a cause that is the leading cause contributing to the result when compared to all other contributing causes."

NEW SECTION. **Section 6. Codification instruction.** [Sections 1 and 2] are intended to be codified as an integral part of Title 39, chapter 71, and the provisions of Title 39, chapter 71, apply to [sections 1 and 2].

NEW SECTION. **SECTION 7. CONTINGENT VOIDNESS.** IF A COURT FINDS ANY PART OF [THIS ACT] TO BE IN VIOLATION OF ~~THE EQUAL PROTECTION CLAUSES~~ ANY CLAUSE OF THE U.S. OR MONTANA CONSTITUTIONS RELATING TO WORKERS' COMPENSATION CLAIMS OR A COURT THROUGH ANY OTHER ACTION OR DOCTRINE IN LAW OR EQUITY APPLIES THE PRESUMPTION IN [SECTIONS 1 AND 2] TO ANOTHER CLASS OF OCCUPATION OTHER THAN FIREFIGHTERS, THEN [THIS ACT] IS VOID.

NEW SECTION. **Section 8. Effective date -- applicability.** [This act] is effective July 1, 2019, and applies to presumptive occupational diseases diagnosed on or after July 1, 2019.

- END -

AN ACT ESTABLISHING THE FIREFIGHTER PROTECTION ACT BY CREATING PRESUMPTIVE COVERAGE UNDER WORKERS' COMPENSATION FOR CERTAIN DISEASES ASSOCIATED WITH FIREFIGHTING ACTIVITIES; PROVIDING CONDITIONS; PROVIDING A REBUTTAL OPTION FOR INSURERS; PROVIDING OPT-IN CHOICE FOR VOLUNTEER FIREFIGHTING ENTITIES; INCLUDING PRESUMPTIVE OCCUPATIONAL DISEASE WITHIN THE STATE'S PUBLIC POLICY PROVISIONS FOR WORKERS' COMPENSATION; PROVIDING DEFINITIONS; AMENDING SECTIONS 39-71-105, 39-71-124, AND 39-71-407, MCA; AND PROVIDING AN EFFECTIVE DATE AND AN APPLICABILITY DATE.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

Section 1. Presumptive occupational disease for firefighters -- rebuttal -- applicability -- definitions. (1) (a) A firefighter for whom coverage is required under the Workers' Compensation Act is presumed to have a claim for a presumptive occupational disease under the Workers' Compensation Act if the firefighter meets the requirements of [section 2] and is diagnosed with one or more of the diseases listed in subsection (2) within the period listed.

(b) Coverage under [section 2] and this section is optional for the employer of a firefighter for whom coverage under the Workers' Compensation Act is voluntary. An employer of a volunteer firefighter under 7-33-4109 or 7-33-4510 may elect as part of providing coverage under the Workers' Compensation Act to additionally obtain the presumptive occupational disease coverage, subject to the insurer agreeing to provide presumptive coverage.

(2) The following diseases are presumptive occupational diseases proximately caused by firefighting activities, provided that the evidence of the presumptive occupational disease becomes manifest after the number of years of the firefighter's employment as listed for each occupational disease and within 10 years of the last date on which the firefighter was engaged in firefighting activities for an employer:

(a) bladder cancer after 12 years;

(b) brain cancer of any type after 10 years;

(c) breast cancer after 5 years if the diagnosis occurs before the firefighter is 40 years old and is not known to be associated with a genetic predisposition to breast cancer;

(d) myocardial infarction after 10 years;

(e) colorectal cancer after 10 years;

(e) esophageal cancer after 10 years;

(f) kidney cancer after 15 years;

(g) leukemia after 5 years;

(h) mesothelioma or asbestosis after 10 years;

(i) multiple myeloma after 15 years;

(j) non-Hodgkin's lymphoma after 15 years; and

(k) lung cancer after 4 years.

(3) For purposes of calculating the number of years of a firefighter's employment history under subsection (2), a firefighter's employment history after July 1, 2014, may be calculated.

(4) The beneficiaries of a firefighter who otherwise would be eligible for presumptive occupational disease benefits under this section but who dies prior to filing a claim, as provided in [section 2], are eligible for death benefits in the same manner as for a death from an injury, as provided in 39-71-407. The beneficiaries under this subsection (4) are similarly bound by the provisions of exclusive remedy as provided in 39-71-411 and subject to the filing requirements in 39-71-601.

(5) (a) Subject to the provisions of subsection (5)(c), an insurer is liable for the payment of compensation for presumptive occupational disease benefits under this chapter in the same manner as provided in 39-71-407, including objective medical findings of a disease listed in subsection (2) but excluding the requirement in 39-71-407(10) that the objective medical findings trace a relationship between the presumptive occupational disease and the claimant's job history. For myocardial infarction or lung cancer under subsection (2), the diseases must be the type that can reasonably be caused by firefighting activities.

(b) (i) An insurer under plan 1, 2, or 3 that disputes a presumptive occupational disease claim has the burden of proof in establishing by a preponderance of the evidence that the firefighter is not suffering from a compensable presumptive occupational disease. An insurer that disputes the claim may pay benefits under 39-71-608 or 39-71-615 and may pursue dispute mechanisms established in Title 39, chapter 71, part 24.

(ii) An insurer is not liable for the payment of workers' compensation benefits for presumptive

occupational disease if the insurer establishes by a preponderance of the evidence that the firefighter was not exposed during the course and scope of the firefighter's duties to smoke or particles in a quantity sufficient to have reasonably caused the disease claimed.

(c) A total claim payment by an insurer under this section is limited to $5 million for each claim.

(6) This section does not limit an insurer's ability to assert that the occupational disease was not caused by the firefighter's employment history as a firefighter.

(7) A firefighter or the firefighter's beneficiaries may pursue the dispute remedies as provided in Title 39, chapter 71, part 24, if an insurer disputes a claim.

(8) The use of the term "occupational disease" includes a presumptive occupational disease when used in the definitions in 39-71-116 for "claims examiner", "permanent partial disability", "primary medical services", and "treating physician" and when used in 39-71-107, 39-71-307, 39-71-412, 39-71-503, 39-71-601, 39-71-604, 39-71-606, 39-71-615, 39-71-703, 39-71-704, 39-71-713, 39-71-714, 39-71-717, 39-71-1011, 39-71-1036, 39-71-1041, 39-71-1042, 39-71-1101, 39-71-1110, 39-71-1504, 39-71-2311, 39-71-2312, 39-71-2313, 39-71-2316, and 39-71-4003.

(9) [Section 2] and this section:

(a) apply only to presumptive occupational diseases for firefighters; and

(b) do not apply to any other issue relating to workers' compensation and may not be used or cited as guidance in the administration of Title 33 or 37.

(10) For the purposes of [section 2] and this section, the following definitions apply:

(a) "Firefighter" means an individual whose primary duties involve extinguishing or investigating fires, with at least 1 year of firefighting operations in Montana beginning on or after July 1, 2019, as:

(i) a firefighter defined in 19-13-104;

(ii) a volunteer firefighter defined in 7-33-4510, but only if the volunteer firefighter's employer has elected coverage under Title 39, chapter 71, with an insurer that allows an election and the employer has opted separately to include presumptive occupational disease coverage under [section 2] and this section; or

(iii) a volunteer described in 7-33-4109 for a firefighting entity that has elected coverage under Title 39, chapter 71, with an insurer that allows an election and that has opted separately to include presumptive occupational disease coverage.

(b) "Firefighting activities" means actions required of a firefighter that expose the firefighter to extreme

heat or inhalation or physical exposure to chemical fumes, smoke, particles, or other toxic gases arising directly out of employment as a firefighter.

(c) "Presumptive occupational disease" means harm or damage from one or more of the diseases listed under subsection (2) that is established by objective medical findings and that is contracted in the course and scope of employment as a firefighter from either a single day or work shift or for more than a single day or work shift but that is not specific to an accident.

Section 2. Conditions for claiming presumptive occupational disease. (1) Except as provided in subsection (4), the following must be satisfied for the presumption in [section 1] to apply:

(a) the firefighter must timely file a claim for a presumptive occupational disease under Title 39, chapter 71, as soon as the firefighter knows or should have known that the firefighter's condition resulted from a presumptive occupational disease; and

(b) (i) the firefighter must have undergone, within 90 days of hiring, a medical examination that did not reveal objective medical evidence or a family history of the presumptive occupational disease for which the presumption under [section 1] is sought; and

(ii) the firefighter must have undergone subsequent periodic medical examinations at least once every 2 years.

(2) (a) Subsection (1)(b) does not require the employer of a firefighter to provide or pay for a medical examination, either at the time of hiring or during the subsequent term of employment.

(b) If the employer of a firefighter does not provide or pay for a medical examination under subsection (1)(b), the firefighter may satisfy the requirements of subsection (1)(b) by obtaining the medical examination at the firefighter's expense or at the expense of another party.

(3) To qualify for a presumptive occupational disease, a firefighter may not:

(a) be a regular user of tobacco products;

(b) have a history of regular tobacco use in the 10 years preceding the filing of the claim under subsection (1)(a); or

(c) have been exposed by a cohabitant who regularly and habitually used tobacco products within the home for a period of 10 or more years prior to the diagnosis.

(4) A firefighter who, prior to [the effective date of this act], did not receive a medical examination as

frequently as the intervals set forth in subsection (1)(b) is not ineligible on that basis for a presumptive occupational disease claim under [section 1] and this section.

Section 3. Section 39-71-105, MCA, is amended to read:

"39-71-105. Declaration of public policy. For the purposes of interpreting and applying this chapter, the following is the public policy of this state:

(1) An objective of the Montana workers' compensation system is to provide, without regard to fault, wage-loss and medical benefits to a worker suffering from a work-related injury or disease. Wage-loss benefits are not intended to make an injured worker whole but are intended to provide assistance to a worker at a reasonable cost to the employer. Within that limitation, the wage-loss benefit should bear a reasonable relationship to actual wages lost as a result of a work-related injury or disease.

(2) It is the intent of the legislature to assert that a conclusive presumption exists that recognizes that a holder of a current, valid independent contractor exemption certificate issued by the department is an independent contractor if the person is working under the independent contractor exemption certificate. The holder of an independent contractor exemption certificate waives the rights, benefits, and obligations of this chapter unless the person has elected to be bound personally and individually by the provisions of compensation plan No. 1, 2, or 3.

(3) A worker's removal from the workforce because of a work-related injury or disease has a negative impact on the worker, the worker's family, the employer, and the general public. Therefore, an objective of the workers' compensation system is to return a worker to work as soon as possible after the worker has suffered a work-related injury or disease.

(4) Montana's workers' compensation and occupational disease insurance systems are intended to be primarily self-administering. Claimants should be able to speedily obtain benefits, and employers should be able to provide coverage at reasonably constant rates. To meet these objectives, the system must be designed to minimize reliance upon lawyers and the courts to obtain benefits and interpret liabilities.

(5) This chapter must be construed according to its terms and not liberally in favor of any party.

(6) It is the intent of the legislature that:

(a) a stress ~~claims~~ claim, often referred to as a "mental-mental ~~claims~~ claim" ~~and~~ or a "mental-physical ~~claims~~ claim", ~~are~~ is not compensable under Montana's workers' compensation and occupational disease laws.

The legislature recognizes that these claims are difficult to objectively verify and that the claims have a potential to place an economic burden on the workers' compensation and occupational disease system. The legislature also recognizes that there are other states that do not provide compensation for various categories of stress claims and that stress claims have presented economic problems for certain other jurisdictions. In addition, not all injuries are compensable under the present system, and it is within the legislature's authority to define the limits of the workers' compensation and occupational disease system. However, it is also within the legislature's authority to recognize the public service provided by firefighters and to join with other states that have extended a presumptive occupational disease recognition to firefighters.

(b) for occupational disease or presumptive occupational disease claims, because of the nature of exposure, workers should not be required to provide notice to employers of the disease as required of injuries and that the requirements for filing of claims reflect consideration of when the worker knew or should have known that the worker's condition resulted from an occupational disease or a presumptive occupational disease. The legislature recognizes that occupational diseases in the workplace are caused by events occurring on more than a single day or work shift and that ~~it is within the legislature's~~ the legislature has the authority to define an occupational disease or a presumptive occupational disease and establish the causal connection to the workplace."

Section 4. Section 39-71-124, MCA, is amended to read:

"39-71-124. Applicability of Workers' Compensation Act -- exceptions. Except as provided in 39-71-407, 39-71-601, and 39-71-603 and as specified in [section 1], this chapter applies to injuries and occupational diseases."

Section 5. Section 39-71-407, MCA, is amended to read:

"39-71-407. Liability of insurers -- limitations. (1) For workers' compensation injuries, each insurer is liable for the payment of compensation, in the manner and to the extent provided in this section, to an employee of an employer covered under plan No. 1, plan No. 2, and the state fund under plan No. 3 that it insures who receives an injury arising out of and in the course of employment or, in the case of death from the injury, to the employee's beneficiaries, if any.

(2) An injury does not arise out of and in the course of employment when the employee is:

(a) on a paid or unpaid break, is not at a worksite of the employer, and is not performing any specific tasks for the employer during the break; or

(b) engaged in a social or recreational activity, regardless of whether the employer pays for any portion of the activity. The exclusion from coverage of this subsection (2)(b) does not apply to an employee who, at the time of injury, is on paid time while participating in a social or recreational activity or whose presence at the activity is required or requested by the employer. For the purposes of this subsection (2)(b), "requested" means the employer asked the employee to assume duties for the activity so that the employee's presence is not completely voluntary and optional and the injury occurred in the performance of those duties.

(3) (a) ~~An~~ Subject to subsection (3)(c), an insurer is liable for an injury, as defined in 39-71-119, only if the injury is established by objective medical findings and if the claimant establishes that it is more probable than not that:

(i) a claimed injury has occurred; or

(ii) a claimed injury has occurred and aggravated a preexisting condition.

(b) Proof that it was medically possible that a claimed injury occurred or that the claimed injury aggravated a preexisting condition is not sufficient to establish liability.

(c) Objective medical findings are sufficient for a presumptive occupational disease as defined in [section 1] but may be overcome by a preponderance of the evidence.

(4) (a) An employee who suffers an injury or dies while traveling is not covered by this chapter unless:

(i) the employer furnishes the transportation or the employee receives reimbursement from the employer for costs of travel, gas, oil, or lodging as a part of the employee's benefits or employment agreement and the travel is necessitated by and on behalf of the employer as an integral part or condition of the employment; or

(ii) the travel is required by the employer as part of the employee's job duties.

(b) A payment made to an employee under a collective bargaining agreement, personnel policy manual, or employee handbook or any other document provided to the employee that is not wages but is designated as an incentive to work at a particular jobsite is not a reimbursement for the costs of travel, gas, oil, or lodging, and the employee is not covered under this chapter while traveling.

(5) Except as provided in subsection (6), an employee is not eligible for benefits otherwise payable under this chapter if the employee's use of alcohol or drugs not prescribed by a physician is the major contributing cause of the accident.

(6) (a) An employee who has received written certification, as defined in 50-46-302, from a physician for the use of marijuana for a debilitating medical condition and who is otherwise eligible for benefits payable under this chapter is subject to the limitations of subsections (6)(b) through (6)(d).

(b) An employee is not eligible for benefits otherwise payable under this chapter if the employee's use of marijuana for a debilitating medical condition, as defined in 50-46-302, is the major contributing cause of the injury or occupational disease.

(c) Nothing in this chapter may be construed to require an insurer to reimburse any person for costs associated with the use of marijuana for a debilitating medical condition, as defined in 50-46-302.

(d) In an accepted liability claim, the benefits payable under this chapter may not be increased or enhanced due to a worker's use of marijuana for a debilitating medical condition, as defined in 50-46-302. An insurer remains liable for those benefits that the worker would qualify for absent the worker's use of marijuana for a debilitating medical condition.

(7) The provisions of subsection (5) do not apply if the employer had knowledge of and failed to attempt to stop the employee's use of alcohol or drugs not prescribed by a physician. This subsection (7) does not apply to the use of marijuana for a debilitating medical condition because marijuana is not a prescribed drug.

(8) If there is no dispute that an insurer is liable for an injury but there is a liability dispute between two or more insurers, the insurer for the most recently filed claim shall pay benefits until that insurer proves that another insurer is responsible for paying benefits or until another insurer agrees to pay benefits. If it is later proven that the insurer for the most recently filed claim is not responsible for paying benefits, that insurer must receive reimbursement for benefits paid to the claimant from the insurer proven to be responsible.

(9) If a claimant who has reached maximum healing suffers a subsequent nonwork-related injury to the same part of the body, the workers' compensation insurer is not liable for any compensation or medical benefits caused by the subsequent nonwork-related injury.

(10) ~~An~~ Except for cases of presumptive occupational disease as provided in [sections 1 and 2], an employee is not eligible for benefits payable under this chapter unless the entitlement to benefits is established by objective medical findings that contain sufficient factual and historical information concerning the relationship of the worker's condition to the original injury.

(11) (a) For occupational diseases, every employer enrolled under plan No. 1, every insurer under plan No. 2, or the state fund under plan No. 3 is liable for the payment of compensation, in the manner and to the

extent provided in this chapter, to an employee of an employer covered under plan No. 1, plan No. 2, or the state fund under plan No. 3 if the employee is diagnosed with a compensable occupational disease.

(b) The provisions of subsection (11)(a) apply to presumptive occupational disease if the employee is diagnosed and meets the conditions of [sections 1 and 2].

(12) An insurer is liable for an occupational disease only if the occupational disease:

(a) is established by objective medical findings; and

(b) arises out of or is contracted in the course and scope of employment. An occupational disease is considered to arise out of or be contracted in the course and scope of employment if the events occurring on more than a single day or work shift are the major contributing cause of the occupational disease in relation to other factors contributing to the occupational disease. For the purposes of this subsection (12), an occupational disease is not the same as a presumptive occupational disease.

(13) When compensation is payable for an occupational disease or a presumptive occupational disease, the only employer liable is the employer in whose employment the employee was last injuriously exposed to the hazard of the disease.

(14) When there is more than one insurer and only one employer at the time that the employee was injuriously exposed to the hazard of the disease, the liability rests with the insurer providing coverage at the earlier of:

(a) the time that the occupational disease or presumptive occupational disease was first diagnosed by a health care provider; or

(b) the time that the employee knew or should have known that the condition was the result of an occupational disease or a presumptive occupational disease.

(15) In the case of pneumoconiosis, any coal mine operator who has acquired a mine in the state or substantially all of the assets of a mine from a person who was an operator of the mine on or after December 30, 1969, is liable for and shall secure the payment of all benefits that would have been payable by that person with respect to miners previously employed in the mine if acquisition had not occurred and that person had continued to operate the mine, and the prior operator of the mine is not relieved of any liability under this section.

(16) As used in this section, "major contributing cause" means a cause that is the leading cause contributing to the result when compared to all other contributing causes."

Section 6. Codification instruction. [Sections 1 and 2] are intended to be codified as an integral part of Title 39, chapter 71, and the provisions of Title 39, chapter 71, apply to [sections 1 and 2].

Section 7. Contingent voidness. If a court finds any part of [this act] to be in violation of any clause of the U.S. or Montana constitutions relating to workers' compensation claims or a court through any other action or doctrine in law or equity applies the presumption in [sections 1 and 2] to another class of occupation other than firefighters, then [this act] is void.

Section 8. Effective date -- applicability. [This act] is effective July 1, 2019, and applies to presumptive occupational diseases diagnosed on or after July 1, 2019.

- END -

I hereby certify that the within bill,

SB 0160, originated in the Senate.

President of the Senate

Signed this _____ day

of _____, 2019.

Secretary of the Senate

Speaker of the House

Signed this _____ day

of _____, 2019.

SENATE BILL NO. 160

INTRODUCED BY N. MCCONNELL, K. ABBOTT, J. BACHMEIER, J. BAHR, D. BARRETT, B. BENNETT, B. BESSETTE, L. BISHOP, C. BOLAND, Z. BROWN, M. CAFERRO, J. COHENOUR, W. CURDY, K. DUDIK, M. DUNWELL, D. FERN, R. FITZGERALD, P. FLOWERS, M. FUNK, F. GARNER, J. GROSS, B. GRUBBS, J. HAMILTON, D. HARVEY, D. HAYMAN, M. HOPKINS, T. JACOBSON, J. KARJALA, K. KELKER, C. KEOGH, E. KERR-CARPENTER, R. LYNCH, M. MACDONALD, S. MALEK, M. MARLER, E. MCCLAFFERTY, M. MCNALLY, S. MORIGEAU, A. OLSEN, R. PEPPERS, Z. PERRY, G. PIERSON, J. POMNICHOWSKI, J. READ, T. RICHMOND, T. RUNNINGWOLF, M. RYAN, W. SALES, D. SANDS, C. SCHREINER, J. SESSO, R. SHAW, J. SMALL, B. SMITH, F. SMITH, S. STEWART PEREGOY, K. SULLIVAN, S. VINTON, T. WELCH, T. WINTER, T. WOODS

AN ACT ESTABLISHING THE FIREFIGHTER PROTECTION ACT BY CREATING PRESUMPTIVE COVERAGE UNDER WORKERS' COMPENSATION FOR CERTAIN DISEASES ASSOCIATED WITH FIREFIGHTING ACTIVITIES; PROVIDING CONDITIONS; PROVIDING A REBUTTAL OPTION FOR INSURERS; PROVIDING OPT-IN CHOICE FOR VOLUNTEER FIREFIGHTING ENTITIES; INCLUDING PRESUMPTIVE OCCUPATIONAL DISEASE WITHIN THE STATE'S PUBLIC POLICY PROVISIONS FOR WORKERS' COMPENSATION; PROVIDING DEFINITIONS; AMENDING SECTIONS 39-71-105, 39-71-124, AND 39-71-407, MCA; AND PROVIDING AN EFFECTIVE DATE AND AN APPLICABILITY DATE.

GOVERNOR'S OFFICE OF BUDGET AND PROGRAM PLANNING

Fiscal Note 2021 Biennium

Bill #	SB0160	Title:	Provide workers' compensation for presumptive diseases of firefighters
Primary Sponsor:	McConnell, Nate	Status:	As Introduced

X Significant Local Gov Impact ☐Needs to be included in HB 2 ☐Technical Concerns

☐Included in the Executive Budget ☐Significant Long-Term Impacts ☐Dedicated Revenue Form Attached

Description of fiscal impact: This bill has no fiscal impact to the state.

FISCAL SUMMARY

	FY 2020 Difference	FY 2021 Difference	FY 2022 Difference	FY 2023 Difference
Expenditures:				
General Fund	$0	$0	$0	$0
Revenue:				
General Fund	$0	$0	$0	$0
Net Impact-General Fund Balance:	$0	$0	$0	$0

FISCAL ANALYSIS

Assumptions:

Montana State Fund:

1. SB 160 creates a presumption that a firefighter has a compensable presumptive occupational disease for any of the 13 enumerated diseases and conditions, if the firefighter satisfies the requirements of New Section, Section 2.
2. An insurer can rebut the presumptive occupational disease by providing substantial evidence that the conditions in New Section, Section 2 are not met or by proving that the firefighter did not have enough exposure to have reasonably caused the presumptive occupational disease.
3. The number of and potential cost of presumptive occupational disease claims cannot be determined. Any cost impacts that result from SB 160 will be reflected in future rates for the governing class code.
4. The employers of volunteer firefighters may elect to be covered by workers' compensation insurance. If coverage is elected, a separate request for presumptive occupational disease coverage must be made. An insurer can decline to provide the presumptive occupational disease election. A separate policy endorsement for presumptive occupational disease coverage will have to be developed and filed with the Commissioner of Securities and Insurance.

Effect on County or Other Local Revenues or Expenditures:

Montana League of Cities and Towns (MLCT)

1. All governmental entities that provide workers' compensation insurance coverage for paid firefighters will be subject to SB 160. Governmental entities that provide workers' compensation insurance coverage for volunteer firefighters with optional coverage may be impacted by SB 160 if they agree to provide presumptive occupational disease coverage.
2. It will be difficult to measure the scope of the financial impact of this benefit on the self-insured workers' compensation program for cities and towns since the frequency of the listed diseases and costs of treatment are unknown. The obligation to pay for the listed diseases may result in increased workers' compensation costs for member municipalities to presumptively cover firefighters.
3. The actuary for the self-insured workers' compensation programs for cities and towns has indicated they will use loss experience from other pooling clients located in states with a presumption in workers' compensation to calculate a rate for Montana.
4. Neither the rating system nor the reserves have been set to pay claims that will arise from this change. The self-insured workers' compensation program will establish rates and development factors to establish adequate reserves. MLCT cannot estimate the exact fiscal impact.

Sponsor's Initials	*Date*	*Budget Director's Initials*	*Date*
		TL	1/30/19

MINUTES

MONTANA SENATE
66th LEGISLATURE - REGULAR SESSION

COMMITTEE ON BUSINESS, LABOR, AND ECONOMIC AFFAIRS

Call to Order: Chair Steve Fitzpatrick, on January 29, 2019 at 8:30 A.M., in Room 422 Capitol

ROLL CALL

Members Present:

Sen. Steve Fitzpatrick, Chair (R)
Sen. Dee Brown, Vice Chair (R)
Sen. Sue Malek, Vice Chair (D)
Sen. Carlie Boland (D)
Sen. Jason W. Ellsworth (R)
Sen. Terry Gauthier (R)
Sen. Jason D. Small (R)
Sen. Frank Smith (D)
Sen. Gordon Vance (R)
Sen. Gene Vuckovich (D)

Members Excused: None

Members Absent: None

Staff Present: Linda Keim, Committee Secretary
Jameson Walker, Legislative Services Division

Audio Committees: These minutes are in outline form only. They provide a list of participants and a record of official action taken by the committee. The link to the audio recording of the meeting is available on the Legislative Branch website.

Committee Business Summary:

Hearing & Date Posted: HB 62, 1/24/2019; SB 160, 1/24/2019; SB 171, 1/25/2019

Executive Action: SB 126, Do Pass

08:31:34 Chairman Fitzpatrick

HEARING ON HB 62

Opening Statement by Sponsor:
08:32:26 Rep. Bruce Grubbs (R), HD 68, opened the hearing on HB 62. Amend nonresident auto insurance requirements.

Proponents' Testimony:
08:35:09 Bob Biskupiak, deputy insurance commissioner, Office of the Commissioner of Securities and Insurance, State Auditor (CSI)
08:38:44 John Iverson, Independent Insurance Agents of Montana

Opponents' Testimony: None

Informational Testimony: None

Questions from Committee Members and Responses:
08:40:22 Sen. Brown
08:42:03 Mr. Biskupiak, CSI
08:42:15 Sen. Malek
08:44:21 Mr. Biskupiak
08:45:07 Sen. Ellsworth
08:46:46 Mr. Biskupiak
08:47:01 Chairman Fitzpatrick
08:48:10 Mr. Biskupiak

Closing by Sponsor:
08:48:18 Rep. Grubbs

08:49:14 Chairman Fitzpatrick

HEARING ON SB 160

Opening Statement by Sponsor:
08:50:58 Sen. Nate McConnell (D), SD 48, opened the hearing on SB 160. Provide workers' compensation for presumptive diseases of firefighters.

Proponents' Testimony:
08:58:30 Joel Fassbinder, president, Montana State Council of Professional Fire Fighters; Montana State Firemen's Association
08:59:04 Dave Maslowski, Montana State Firemen's Association (MSFA)
EXHIBIT(bus17a01)

09:02:03 Joel Gaertig, political advisor, Montana State Firemen's Association
09:05:55 Rich Cowger, president, Montana State Fire Chief's Association (MSFCA)
EXHIBIT(bus17a02)
EXHIBIT(bus17a03)

09:08:34 Jeff Brandt, chief, Missoula City Fire Department (MCFD)
09:09:52 Adam Haight, AFL-CIO

Opponents' Testimony:
09:10:35 Larry Jones, Montana Self Insurers Association (MSIA)
09:14:46 Alan Hulse, Montana Municipal Interlocal Authority
09:21:36 Eric Bryson, Montana Association of Counties (MACo)
09:28:31 Cary Hegreberg, interim CEO, Montana Chamber of Commerce
09:31:12 Brian Thompson, Montana Municipal Interlocal Authority

Informational Testimony:
09:33:01 Laura Williamson, state epidemiologist, Department of Public Health and Human Services (DPHHS)
09:33:37 Bruce Spencer, National Council on Compensation Insurance
EXHIBIT(bus17a04)

Questions from Committee Members and Responses:
09:36:24 Sen. Brown
09:38:13 Mr. Maslowski, MSFA
09:38:23 Chairman Fitzpatrick
09:38:35 Mr. Maslowski
09:38:50 Sen. Ellsworth
09:42:36 Sen. McConnell deferred
09:43:41 Jeff Brandt, MCFD
09:44:26 Sen. McConnell
09:48:04 Ms. Williamson, DPHHS
09:48:21 Chairman Fitzpatrick
09:48:43 Ms. Williamson
09:50:28 Sen. Malek
09:57:15 Sen. McConnell
09:57:45 Sen. Brown
10:01:29 Mr. Cowger, MSFCA
10:02:27 Chairman Fitzpatrick
10:02:50 Mr. Cowger
10:04:01 Sen. Gauthier
10:06:51 Mr. Cowger
10:07:40 Chairman Fitzpatrick
10:07:57 Mr. Cowger
10:08:29 Sen. Smith
10:10:52 Mr. Bryson, MACo
10:11:22 Chairman Fitzpatrick
10:12:18 Mr. Jones, MSIA
10:13:44 Chairman Fitzpatrick
10:15:15 Sen. McConnell
10:16:13 Sen. Gauthier
10:18:22 Sen. McConnell
10:19:42 Sen. Ellsworth
10:21:45 Sen. McConnell
10:21:49 Sen. Small
10:22:17 Sen. McConnell

10:22:41 Chairman Fitzpatrick
10:24:08 Sen. McConnell

Closing by Sponsor:
10:24:19 Sen. McConnell

10:25:08 Chairman Fitzpatrick

Chairman Fitzpatrick turned over the duties of the Chair to Vice Chair Brown.

10:27:00 Chair Brown

HEARING ON SB 171

Opening Statement by Sponsor:
10:27:10 Sen. Steve Fitzpatrick (R), SD 10, opened the hearing on SB 171. Generally revise laws related to firefighters.

Proponents' Testimony:
10:31:52 Joel Gaertig, Montana State Firemen's Association
10:32:15 Brian Reed, Montana State Council of Professional Fire Fighters

Opponents' Testimony: None

Informational Testimony: None

Questions from Committee Members and Responses:
10:33:24 Sen. Boland
10:35:01 Sen. Fitzpatrick
10:35:06 Sen. Vuckovich
10:35:22 Sen. Fitzpatrick
10:35:40 Chair Brown
10:38:15 Sen. Fitzpatrick
10:39:03 Sen. Malek
10:40:07 Sen. Fitzpatrick
10:40:17 Sen. Ellsworth
10:43:32 Sen. Fitzpatrick
10:44:00 Chair Brown
10:44:08 Sen. Malek
10:44:56 Sen. Fitzpatrick
10:46:41 Sen. Boland
10:47:03 Sen. Fitzpatrick

Closing by Sponsor:
10:47:39 Sen. Fitzpatrick

10:47:46 Chair Brown

Chairman Fitzpatrick assumed the duties of the Chair.

10:48:28 Recess
10:59:13 Reconvene

Sen. Vance was excused.

10:59:15 Chair Fitzpatrick

EXECUTIVE ACTION ON SB 126

10:59:18 **Motion:** Sen. D. Brown moved that **SB 126 DO PASS**.

Discussion:
10:59:42 Sen. Malek
11:00:39 Sen. Ellsworth
11:02:06 Sen. Malek
11:02:48 Sen. Brown

11:03:22 **Vote:** Motion carried 6-4 by roll call vote with Sen. Boland, Sen. Malek, Sen. F. Smith and Sen. Vuckovich voting no. Sen. Vance voted by proxy.

Committee Business:
11:04:25 Chairman Fitzpatrick
11:04:28 Jameson Walker, Legislative Services Division (LSD)
11:05:21 Chairman Fitzpatrick
11:05:56 Sen. Brown
11:06:18 Chairman Fitzpatrick
11:06:31 Sen. Boland

ADJOURNMENT

Adjournment: 11:07 AM

_____
Linda Keim, Secretary

lk

Additional Documents:

EXHIBIT(bus17aad.pdf)

BUSINESS & LABOR
EXHIBIT NO. 1
DATE 1/29/2019
BILL NO. SB160

State of Idaho
DEPARTMENT OF INSURANCE

C.L. "BUTCH" OTTER
Governor

700 West State Street, 3rd Floor
P.O. Box 83720
Boise, Idaho 83720-0043
Phone 208-334-4250
Fax 208-334-4398
Website: https://doi.idaho.gov

DEAN L. CAMERON
Director

Idaho Department of Insurance News Release
For immediate release: October 2, 2018
Contact: Steve Lombard, 208-334-4312
steve.lombard@doi.idaho.gov

Workers' Compensation Rates to Decrease in Idaho for 2019

BOISE, ID – A proposal for a minus (-) 4.2 percent overall rate change to Idaho workers' compensation insurance, effective January 1, 2019, has been approved by the Idaho Department of Insurance. The proposed rate change comes from the National Council on Compensation Insurance (NCIC).

"We are pleased to announce this reduction, a move which will benefit Idaho businesses, their employees and the economy in general," said Director Dean Cameron. "The change in the 2019 workers' compensation rates reflects an improvement in our state rating factors, including a slight decline in both the frequency of claims for lost work time, and the average cost of those claims."

The state's workers' compensation benefit system is designed to cover medical costs associated with workplace injuries. It also provides wage replacement benefits to injured workers for lost work time. NCCI annually collects information about Idaho's workers' compensation system and submits proposed rates to the Department of Insurance for review and approval.

About the Department of Insurance
The Idaho Department of Insurance has been regulating the business of insurance in Idaho since 1901. The mission of the Department is to serve and protect Idahoans by equitably, effectively and efficiently administering the Idaho Insurance Code and the International Fire Code. For more information, visit doi.idaho.gov.

###

Protect Those Who Protect Us

☑ PASS SB160 the Montana Firefighter Heath and Safety Bill

Facts About Fire Fighter Occupational Cancer:

Fire fighters are more likely to contract certain cancers than the general population:

- Testicular (2.02 times greater)
- Non-Hodgkin (1.51)
- Prostate Cancer (1.28)
- Brain Cancer (1.31)
- Leukemia (1.14)
- Multiple Myeloma (1.53)
- Skin Cancer (1.39)
- Malignant Melanoma (1.31)
- Colon Cancer (1.21)

Fire fighters are on the frontlines fighting fires and saving lives and, as a result, we're exposed to a toxic soup of chemicals and combustion byproducts linked to occupational cancer.

A study by National Institute for Occupational Safety and Health (NIOSH) in October 2013 found that **fire fighters have a 14 percent increased risk of dying from cancer compared to the general population.**

Fire fighters are not just exposed to toxins through inhalation. Some contaminants are also absorbed through the skin and contribute to a fire fighter's overall exposure.

[SB160] Facts About the Montana Firefighter Health and Safety Bill:

- The Montana Firefighter Health and Safety Bill covers job-related illnesses for both volunteer and career fire fighters, including heart/lung disease, post-traumatic stress disorder (PTSD) and certain occupational cancers.
- The bill requires fire fighters to have physicals at regular intervals and excludes regular tobacco users.
- Occupational cancers covered by this bill include colorectal cancers, esophageal cancers, kidney cancers, leukemia, mesothelioma, multiple myeloma and non-hodgkin lymphoma.
- Montana voters agree that it is important for job-related illnesses to be covered for heart disease (81% support), respiratory disease (80% support), cancer (76% support), PTSD (70% support) and infectious disease (68% support).
- 65 percent of Montana voters would support a law to cover fire fighters for job-related illnesses.

Lavender Ribbon Report

BEST PRACTICES
for Preventing Firefighter Cancer

EXHIBIT 2
DATE 1-29-2019
SB 160

Volunteer & Combination Officers Section

11 ACTIONS TO HELP MITIGATE THE RISK OF CANCER

NVFC
NATIONAL VOLUNTEER FIRE COUNCIL
FIRE • EMS • RESCUE

Lavender Ribbon Report

BEST PRACTICES

for Preventing Firefighter Cancer

11 ACTIONS TO MITIGATE THE RISK OF CANCER

Volunteer & Combination Officers Section

Release Date: August 2018

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VCOS VISION STATEMENT

To provide chiefs and chief officers who manage volunteers within a volunteer or combination fire, rescue or EMS delivery system with information, education, services and representation to enhance their professionalism.

VCOS MISSION STATEMENT

To represent the interests of all volunteer and combination fire/rescue/EMS agencies. We will be a dynamic organization characterized by our integrity, customer focus and membership development, with value placed on people and the superior utilization of technology. We will excel by creating educational programs through unrivaled networking and by helping VCOS members further their success and reach their potential.

NVFC VISION STATEMENT

The NVFC's vision is to be the leading advocate and resource organization for the American volunteer fire, emergency medical and rescue services.

NVFC MISSION STATEMENT

To provide a unified voice for volunteer fire/EMS/rescue organizations. This mission will be accomplished by:

- Representing the interests of the volunteer fire, emergency medical, or rescue organizations at the U.S. Congress and federal agencies
- Promoting the interests of the state and local organizations at a national level
- Promoting and providing education and training for volunteer fire, emergency medical, or rescue organizations
- Providing representation on national standard-setting committees and projects
- Gathering information from and disseminating information to volunteer fire, emergency medical, or rescue organizations.

August 2018

Members of the Fire and Emergency Services,

The International Association of Fire Chiefs' Volunteer and Combination Officers Section (VCOS) and the National Volunteer Fire Council (NVFC) are proud to release this important report focused on providing actions to reduce the risk factors of cancer in the fire service. Unfortunately, this topic has had a significantly increasing impact on firefighter health and welfare. We have started to see great strides by departments and responders everywhere in combatting and preventing cancer, but more still needs to be done. The time is NOW to make changes.

Our hope is that this report provides a helpful summary of best practice solutions to implement in your departments to prevent cancer. We've aimed to keep this report focused and easily digestible to give you real takeaways and solutions. Divided into 11 best practices, the report provides background information, statistics, resources and action items to put into place.

It is imperative that local leaders take this report to heart and spend the time and energy to make changes to improve the safety and health of responders. Too often, we hear about firefighters suffering from and dying of cancer. What if we had done things differently and washed our personal protective equipment (PPE) thoroughly and stored it in a better way? There are many relatively cost-effective actions that can be taken to make a difference.

As one firefighter with cancer stated, "Every one of us in this business has thought of the end results of a lifetime of carcinogens. You just do. But in true fashion, I never believed it would happen to me." We must all take personal responsibility and accountability to act and create change.

The VCOS and NVFC leadership would like to thank the committee that worked diligently to put this report together. A lot of hours and hard work went into compiling this report.

We dedicate this report to those responders that are battling or have lost their battle with cancer. Let's all pledge that we will do better to implement cancer prevention practices in honor of those responders.

Thanks for taking the time to read this report. Please help us distribute this life-saving information. Stay safe out there.

For more information about VCOS, visit vcos.org. For more information about the NVFC, visit nvfc.org. For additional cancer resources, go to firstrespondercenter.org/cancer.

Sincerely,

Chief Timothy S. Wall

Chair, Volunteer and Combination Officers Section
International Association of Fire Chiefs

Chief Kevin D. Quinn

Chair, National Volunteer Fire Council

The issue of occupational cancer has been on the forefront of firefighter safety for the past few years. Cancer is now recognized as one of the major killers of both career and volunteer firefighters, which we in the public safety community have only recently begun to admit. It is our duty to accept the need to change the safety culture as it relates to occupational cancer. The impact cancer brings to our family, children, friends and colleagues can no longer be ignored. The carcinogens associated with the building industry, as well as the fire-retardant materials found in homes and business today impact all public safety response personnel. This report provides information for members of the response community on the actions necessary to protect ourselves from occupational cancer. We have named it the *Lavender Ribbon Report* since lavender is the symbol for general cancer awareness and represents ALL cancers.

Chief James P. Seavey Sr.

BEST PRACTICES
for Preventing
FIREFIGHTER CANCER

1. Full protective equipment (PPE) must be worn throughout the entire incident, including SCBA during salvage and overhaul.
2. A second hood should be provided to all entry-certified personnel in the department.
3. Following exit from the IDLH, and while still on air, you should begin immediate gross decon of PPE using soap water and a brush, if weather conditions allow. PPE should then be placed into a sealed plastic bag and placed in an exterior compartment of the rig, or if responding in POVs, placed in a large storage tote, thus keeping the off-gassing PPE away from passengers and self.
4. After completion of gross decon procedures as discussed above, and while still on scene, the exposed areas of the body (neck, face, arms and hands) should be wiped off immediately using wipes, which must be carried on all apparatus. Use the wipes to remove as much soot as possible from head, neck, jaw, throat, underarms and hands immediately.
5. Change your clothes and wash them after exposure to products of combustion or other contaminants. Do this as soon as possible and/or isolate in a trash bag until washing is available.
6. Shower as soon as possible after being exposed to products of combustion or other contaminants. "Shower within the Hour"
7. PPE, especially turnout pants, must be prohibited in areas outside the apparatus floor (i.e. kitchen, sleeping areas, etc.) and never in the household.
8. Wipes, or soap and water, should also be used to decontaminate and clean apparatus seats, SCBA and interior crew area regularly, especially after incidents where personnel were exposed to products of combustion.
9. Get an annual physical, as early detection is the key to survival. The NVFC outlines several options at **www.nvfc.org**. "A Healthcare Provider's Guide to Firefighter Physicals" can be downloaded from **www.iafc.org/healthRoadmap**.
10. Tobacco products of any variety, including dip and e-cigarettes should never be used at anytime on or off duty.
11. Fully document ALL fire or chemical exposures on incident reports and personal exposure reports.

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California Casualty AUTO AND HOME INSURANCE

FIRE SERVICE OCCUPATIONAL CANCER ALLIANCE

Volunteer & Combination Officers Section

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23 **BEST PRACTICE 5:** Change your clothes and wash them after exposure to products of combustion or other contaminants. Do this as soon as possible or isolate in a trash bag until washing is available.

25 **BEST PRACTICE 6:** Shower as soon as possible after being exposed to products of combustion or other contaminants. "Shower within the hour."

27 **BEST PRACTICE 7:** PPE, especially turnout pants, must be prohibited in areas outside the apparatus floor (i.e., kitchen, sleeping areas, etc.) and never in the household.

28 **BEST PRACTICE 8:** Wipes, or soap and water, should also be used to decontaminate and clean apparatus seats, SCBA and interior crew area regularly, especially after incidents where personnel were exposed to products of combustion.

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FORWARD

The National Fallen Firefighters Foundation (NFFF), International Association of Fire Chiefs (IAFC), Volunteer and Combination Officers Section (VCOS) and National Volunteer Fire Council (NVFC) have all hosted important cancer prevention and awareness sessions and programs. Statistics have repeatedly shown that occupational cancer is a serious threat to firefighters. We all need to change what we are doing each day so that we lessen our risks.

What cancer is doing to our fire/rescue/EMS family is a ***fact.*** This new awareness is our call to action. There will never be a time more important than ***now*** to take personal responsibility to act!

This report outlines 11 best practices to live by—each and every day—so we can change the culture that is killing our first responders.

The nation's fire service is clearly seeing the adverse effects of firefighters getting cancer due to the carcinogens and other contaminates picked up in fires, overhaul, training and residual off-gassing from our PPE. Cancer has become the second leading cause of deaths for firefighters throughout this country (Firefighter Cancer Alliance). It has become an epidemic that is killing our fellow firefighters and friends. Every firefighter likely knows at least one fellow firefighter impacted by this disease.

The National Institute for Occupational Safety and Health (NIOSH) launched a multiyear study in 2010 to examine if firefighters have a higher risk of cancer due to job exposure (Daniels, 2017). The study found that firefighters have a 9 percent higher risk of being diagnosed with cancer and a 14 percent higher risk of dying from cancer than the general population. In addition, another study found that firefighters have a much higher risk than the general public of certain types of cancer, including double the risk of testicular cancer or mesothelioma. The risk of multiple myeloma, non-Hodgkin's lymphoma, skin cancer, malignant melanoma, brain cancer, prostate cancer, colon cancer and leukemia are also higher for firefighters than the general public (LeMasters et al, 2006).

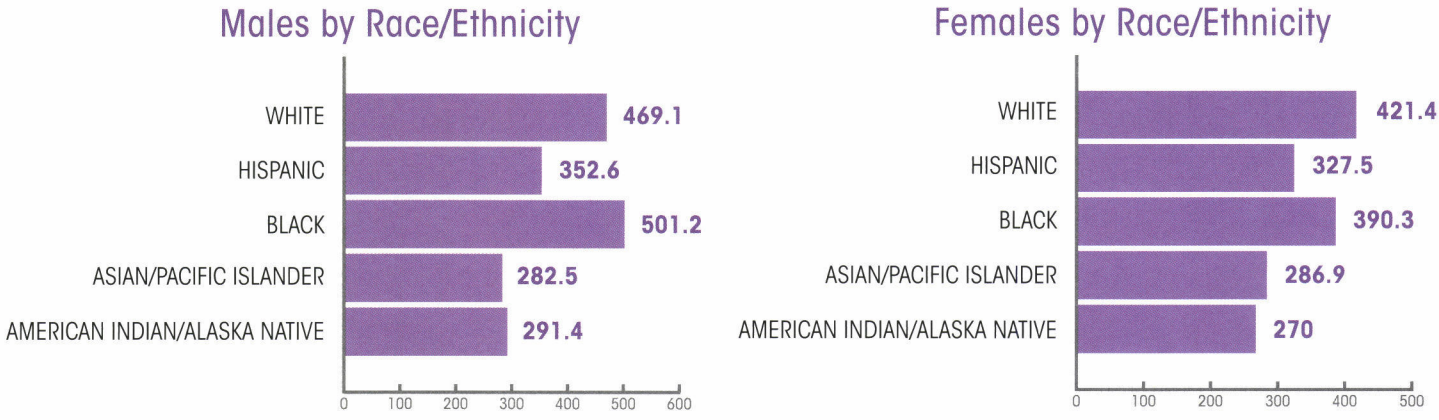
WHO IT AFFECTS?

In a world that still struggles with inequalities, cancer is an equalizer. It doesn't discriminate. It assaults everyone without concern for race, gender, age, ethnicity, religion, or sexual orientation. Below are two graphs from the Centers for Disease Control and Prevention (CDC) that show the breakdown between male and female cancer rates by race and ethnicity from the general population (more information on cancer rates in the general public can be found at *www.cdc.gov/cancer/dcpc/data/race.htm*) (U.S. Cancer Statistics Working Group). Cancer also shows no discrimination in the fire service from career or volunteer, from metropolitan city to rural areas, from rookie to senior firefighter, or even from an entry firefighter to the fire chief.

More research needs to be done to broaden the demographic data concerning cancer in the fire service, but it is clear that the only way to lessen the risks is through action. Cancer is a debilitating disease, and we must work to protect the members of our organizations. We must reject the old way of doing things in favor of new ways that keep our members safe. Gone are the days when dirty gear was accepted and SCBA was removed before the smoke cleared. We must embrace a new way forward that puts the well-being of our members first and rejects practices that have a detrimental impact. Our culture must change to ensure our health and safety is at the forefront of our departments.

RATE OF CANCER – ALL TYPES

RATE PER 100,000 PEOPLE



2015 Data found at www.cdc.gov/cancer/dcpc/data/race.htm (U.S. Cancer Statistics Working Group)

INTRODUCTION

The fire service is faced with one of the most important cultural changes in our history. This change will dictate the way we do business and the way we take care of ourselves on the fireground and at our stations. It starts with the realization that cancer is an epidemic that is currently decimating our profession.

Fortunately, there are specific actions that individuals and departments can take to protect themselves. As the realization of the magnitude of firefighter cancer is becoming more and more evident, the International Association of Fire Chiefs' Volunteer and Combination Officers Section and the National Volunteer Fire Council, along with the Fire Service Occupational Cancer Alliance, Firefighter Cancer Support Network, with support from California Casualty, developed the 11 Best Practices for Preventing Firefighter Cancer. This report is an expansion of these best practices in order to provide specific guidance on how to adopt these actions into the everyday culture of fire departments.

In order to accept a culture change, it is important to understand why it is needed. The obvious reason is to protect and save firefighters. But in reality, it goes far beyond that. This culture change is not just about you and me. It's about the people in our lives we go home to after every call. It's about those we leave behind at the dinner table and whose sporting events and school concerts we miss. It is also about the community members we serve and make these sacrifices for. And it is about our fellow crew members who count on us. We cannot ignore our health when so many people depend on us.

Fire service organizations across this nation must work to provide answers and assistance in reducing the statistics of firefighter cancer, and each local department must put the wellbeing of their responders first. The best practices presented in this guide should be adopted by every department and included in standard operating guidelines/procedures. Use this report to implement a department cancer awareness and prevention initiative and to create a culture where health and wellness are top priorities.

BEST PRACTICE 1:

Full personal protective equipment (PPE) must be worn throughout the entire incident, including a self-contained breathing apparatus (SCBA) during salvage and overhaul.

WHY FULL PERSONAL PROTECTIVE EQUIPMENT?

While culture change is often looked at as doing away with 100 years of traditions in our stations, it truly isn't. Instead, maybe we should call it a "repositioning of culture," which is to say, the reconstruction of the cultural concepts found in our fire service society of today. As we learn more, we must adjust and adapt to current knowledge. In other words, building on the past while creating the future!

The first step in meeting this goal is to be sure that full PPE, including SCBA, is worn throughout the entire incident, including salvage and overhaul. Researchers have found that the inhalation hazard is just one of the major cancer risks (Taking Action Against Cancer, 2013, p. 3). Cancer-causing contaminants can also be found on firefighters' turnout gear from the materials consumed during structural firefighting and training. The skin is the body's largest organ in surface area, and it can be highly absorptive. The Firefighter Cancer Support Network's ***Taking Action Against Cancer in the Fire Service*** white paper explains that "the skin's permeability increases with temperature; for every five-degree increase in skin temperature, absorption increases 400 percent." The U.S. Department of Health and Public Services reports that "the neck area is one of the most likely areas of a firefighter's body to become contaminated with potential carcinogens" (Fent et al., 2013, p. 17).

Fires of today are drastically different than in the past. Studies conducted by Underwriters Laboratories (UL) have found that while people had an average of 17 minutes to escape home fires 30 years ago, this time has been reduced to only 3–4 minutes today (Rosen & Davis, 2016). Thus, today's firefighters are rolling up to more intense blazes that are burning hotter and faster than ever before. Research also shows that "firefighters are now more likely to be exposed to hazardous materials during a structure fire than during an actual hazardous materials incident" (Jahnke et al., 2016, p. 5). Because of changes in building components and the materials and chemicals used in home furnishings, most structure fires create large volumes of hazardous gases and particulates, some of which are persistent and may remain in the environment. Therefore, the need to wear full personal protective equipment, including SCBA, during overhaul is crucial to beating occupational cancer.

BEST PRACTICE 2:

A second hood should be provided to all entry-certified personnel in the department.

Issuing entry-certified personnel a second hood sounds much harder than it is. When you say "second" anything, all most fire chiefs hear are nails scraping down a chalkboard. The thought of spending money on a second hood makes them think of all the other things they won't be able to buy this budget year. As the money is spent on these additional hoods, they can envision their tax boards or donors saying, "Do you really need that?" The simple answer is yes.

Yes, because our personnel are worth it. They step away from their jobs, they miss time with their families, and they risk their lives each and every day for their communities. So yes, they do really need that second hood. They are the most valued asset a department has, and chiefs need to do anything and everything they can to take care of them. That means taking action to prevent them from getting cancer. It is worth it to prevent a firefighter from becoming another statistic. It is also important to the community as a whole, which depends on healthy, active firefighters to protect and serve.

WHY A SECOND HOOD?

The need for a second hood for all entry-certified personnel is based on the fact that most sock hoods offer limited smoke protection on their own. In a 2015 article from firerescue1.com, research was highlighted that showed "a large amount of exposure occurs to the vulnerable face and neck area that is not protected by the SCBA facepiece" (J. Stull & G. Stull, 2015).

The second hood is needed to make sure that firefighters don't have to wear contaminated hoods after firefighting. Providing each firefighter with a second hood allows the firefighters to wash their contaminated hood, while still having the second hood available to use for another emergency. Wearing any hood is better than no hood, but providing each firefighter with two is best.

CLEAN YOUR HOODS

The National Fire Protection Association provides a guide via a bulletin about how they want the fire service to be aware of the following to reduce potential contaminant exposure (NFPA, 2017).

- Protective hoods are in direct contact with the skin.
- The face and neck have been identified as significant areas of dermal exposure to products of combustion and potential carcinogens.
- Firefighter protective hoods are potential carriers of harmful products.

It is very difficult to see the amount of soot and contaminants on a hood unless it is soaked in a bucket of soap and water. As the water begins to turn brown, and in some cases black, only then can one get a glimpse of how dirty it is. Hoods need to be washed immediately upon returning to the station, if not on scene before. Carrying around a dirty hood isn't a sign of toughness, it's a sign of lack of care and a failure to take care of your personal protective equipment.

Most firefighters perform gross decontamination of their gear on scene but don't wash their hood after they return to the station. They either forget or else don't want a drenched hood to re-don if another structure fire is dispatched. The Firefighter Cancer Support Network's "Wash Your Hood Sunday" is a great way to bring awareness to firefighters about maintaining a clean hood but washing your hood once a week might not be enough. What is needed is to wash all gear, including the hood, after each fire event.

In accordance with NFPA 1851, firefighters should follow these practices to keep a clean hood:

- Wash protective hoods after every fire or emergency service use.
- Inspect for damage and continued serviceability after every fire or emergency service use.
- Do not allow protective hoods to be taken home, to a laundromat, or to a dry cleaner for washing.

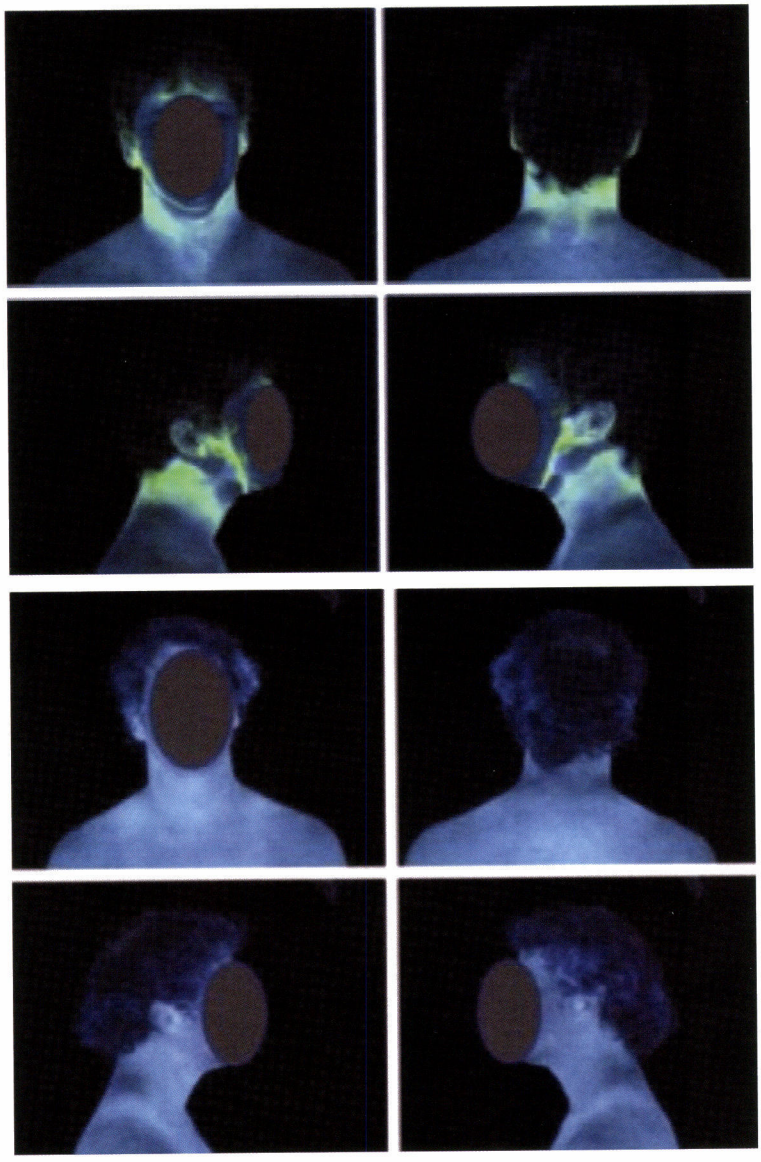
NEW MULTILAYER HOODS DESIGN

As technology evolves and manufacturers try to keep up with the ever-changing fire service and more specifically the ever-changing personal protective ensemble, it becomes clear there is a need for a better protective hood. Not just better for heat protection, but better for hazardous environment protection.

Multilayer hoods provide a particulate barrier in them in an attempt to reduce the amount of particulates that make contact with the firefighter's skin. However, as more material is added to the hood, it also adds weight and restricts the ability for the firefighter to remove heat from their head. This is something that needs to be further studied and monitored to ensure additional stress isn't added to firefighters.

The sock-style hood does not likely stop all the particulates and carcinogens from getting on the skin. As a hood stretches over a firefighter's head and around the facepiece, the knitted material also stretches, allowing the nasty, cancer-causing particulates to directly contact the neck and jaw line. Those areas of the skin are one of the most susceptible to dermal absorption due to the skin's thinness. Even though the protective hood is part of an ensemble with the coat collar, facepiece and helmet earflaps, particulates can still make it through to the skin.

North Carolina State University's Textile Protection and Comfort Center, in conjunction with the Department of Homeland Security Science and Technology Directorate's First Responders Group and LION First Responder PPE Inc., conducted fluorescent aerosol testing of firefighters in complete personal protective equipment, including a standard sock hood. The results show how much aerosol made it through the hood and contacted the firefighters' head, neck and jawline (Responder News, 2016).



The green areas indicate where the florescent dyed particulates accumulated on the neck and jawline of the test subject wearing standard firefighter PPE.

These results show the absence of particulates on the neck, shoulders and jawline of the test subject using the Smoke and Particulate Resistant Structural Turnout Ensemble prototype when used with one of the COTS particulate barrier hoods that are now available on the market (Responder News, 2016).

Until these new multilayer style hoods become the new norm, the need for a second hood is still on the forefront. Keeping hoods clean helps protect the skin areas that are most susceptible to particulates entering the body, which reduces the chances of getting occupational cancer.

GET THAT HOOD OFF

How common is it to see firefighters on scene walking around with the sock hood pulled down around their neck? It is clear these hoods are dangerous purveyors of carcinogens! Why would you want to have it tightly wrapped around the most vulnerable part of your body? As firefighters work and sweat, the contaminants that didn't pass through the hood initially but instead held up residence in the hood are now working their way into the skin. Get that hood off as soon as possible and wipe down the areas around the head, neck and jawline with wipes or soap and water. Wearing the hood during the overhaul phase is a must to keep down the exposure to the carcinogens. Once the fireground tasks are concluded, (whether that is suppression, search or overhaul) get out of the environment, get through the decontamination process and remove the hood. The faster the hood is removed and the skin is cleaned, the faster those cancer-causing contaminants will be off the skin. Take a look at the following video from the Illinois Fire Service Institute for more information: https://t.co/sWatoTAXDd.

A CALL FOR CHANGE

Many fire departments, especially volunteer and small-town departments, find that issuing two complete sets of turnout gear to their members is cost-prohibitive. However, issuing two hoods to each firefighter is more attainable and has a direct impact on their members' health. It allows each firefighter to immediately wash his or her hood upon returning from each structure fire.

The ability to gross decontaminate gear on scene is easily accessible. A low-pressure stream from a garden hose attachment on the pumper allows firefighters to remove the large particles and contaminants from their gear. In addition, the multilayer system that is found in turnouts helps protect firefighters from having contaminants reach the skin. The one piece that lacks the specific barrier properties is the hood. Issuing each entry-certified firefighter a second hood allows them to don a clean, noncontaminated hood for the next fire event they attend. Continuing to re-don and doff a contaminated hood does nothing more than expose firefighters to the cancer-causing contaminants lingering in the hoods. When the firefighter has accessibility to a second hood, or a hood exchange program, they can immediately use this clean hood and decontaminate the originally used hood.

Having a second hood that can be put into service immediately gives the firefighters a sense of security about washing their currently used hood. Most firefighters always want to be response-ready. The thought of missing the next fire or call for service due to not having a firefighter hood would nauseate most. Giving them a second hood is safer for their health and allows them to remain response-ready. In small communities that only have a few firefighters at each scene, having the staff out of service without hoods just isn't an option.

BEST PRACTICE 3:

Following exit from the immediately dangerous to life or health (IDLH) incident and while still on air, you should begin immediate gross decontamination of PPE using soapy water and a brush if weather conditions allow. PPE should then be placed into a sealed plastic bag and placed in an exterior compartment of the apparatus, or, if responding in personally owned vehicles, placed in a large storage tote, thus keeping the off-gassing PPE away from passengers and self.

There was a time when dirty bunker gear was a badge of honor. Over the past few years, firefighters have become more aware of the dangers they face in regard to occupational cancer. Many types of occupational cancer originate from coming into contact with dirty or contaminated gear. The only protection against this danger is to clean the gear to remove the harmful particles and chemicals. This starts with performing gross decontamination (decon) immediately following an incident. The fire service community must use this knowledge to make the dirty, salty-looking firefighter a thing of the past and instead embrace clean gear as the new badge of honor.

GROSS DECONTAMINATION POST-FIRE ON SCENE

Special thanks to Florida Firefighter Safety and Health Collaborative for sharing their recommended SOG with us. The following information comes primarily from their SOG with only slight modifications, based on the research we conducted for this report. You can access their SOG template to be used in your department at their website at https://www.floridafirefightersafety.org/media/attachments/2017/06/24/post-fire-on-scene-decon—ffshc-state-face—final-draft-6-13-17.pdf.

Decontamination has two definitions.

The first from Business Dictionary is "The removal of hazardous substances (bacteria, chemicals, radioactive materials) from employees' bodies, clothing, equipment, tools and/or sites to the extent necessary to prevent the occurrences of adverse health and/or environmental effects."

The second from the Free Dictionary is "To make safe by eliminating or reducing poisonous or otherwise harmful substances, such as noxious chemicals or radioactive materials."

Decontamination may be necessary for exposed or contaminated civilians and emergency responders. There are two types of decon:

1. Emergency/gross decon
2. Technical/secondary decon

The decon process described in the following SOGs strictly refers to an immediate gross decon following exposure to productions of combustion. This procedure shall be systematic and orderly.

The gross decon process shall be utilized for all fires where PPE is worn and exposed to products of combustion. This shall include, but not be limited to structure fires, brush fires, vehicle fires, training fires and any other emergency or non-emergency incidents where the combustion process occurs.

The marking of formal isolation or control zones (as shown below) may not occur at every fire incident, and personnel should be aware that isolation or control zones still exist. Research has shown modern fires generate many harmful products of combustion, which may include polycyclic aromatic hydrocarbons [PAH], volatile organic compounds [VOC], carbon monoxide [CO], hydrogen cyanide [HCN] and numerous other gases, chemicals and toxins (***State FACE Team Recommended SOG 3***). It is important to remember that many of these toxins are colorless or odorless gasses that will not be identifiable. To limit the amount of exposure and the subsequent required decon, consider apparatus placement and approach during any fire attack. Personnel may be able to reduce the amount of exposure by performing a fire attack from the upwind position, when possible, and utilizing the reach of the hose stream (3).

The following zones shall be defined on all fire type incidents:

Hot Zone

- Any area with high risk.
- Any area within the immediate perimeter of any fire or products of combustion (which include smoke and soot).

Warm Zone

- The area between the hot and cold zones.
- The area not in the immediate vicinity of any fire or products of combustion.
- Gross decon and cleaning of the body shall be located in the warm zone.

Cold Zone

- Any area without risk.
- Any area outside of the hot and warm zones, ideally uphill or upwind.
- Rehabilitation (rehab) shall be located in the cold zone.

PREPARATION

Personnel shall be ready at all times to implement these protective procedures. Personnel may find it beneficial to assemble and maintain a personal go bag with a clean uniform or Tyvek suits that can be accessed after any incident where they've been exposed to harmful substances. Recommended items could include a department-approved uniform or jumpsuit, socks, clean footwear, hat, towel and a spare set of turnouts.

The driver/operator shall ensure that the apparatus tank water (or any water used in the decon process) is from a clean, municipal (hydrant) water source and is not from a stagnant or potentially contaminated water source.

GROSS DECON SETUP

Generally, gross decon should be set up by the first arriving suppression apparatus closest to the incident where products of combustion exist. It shall be the driver/operator's responsibility to establish and oversee the gross decon area and process. Where resources are sufficient, it is beneficial to assign an additional crew to oversee the decon process. The gross decon area shall be designated by deploying an approved decon hose line and marking the nozzle location with an alternative colored traffic cone or flagging.

Option (Preferred)—Decon line setup: The decon hose line(s) shall include an inline pressure regulator with a garden-style hose and nozzle. This setup can be facilitated using a 2 1/2 to 3/4 (GHT) reducer. This garden hose setup is preferred as it will provide a flushing with sufficient flow but lower water. It is also easier to control water flow and direction while performing the gross decon process. To facilitate gross decon of multiple personnel, additional decon hose lines from other nearby suppression apparatus can be used.

Option—Decon line setup: The decon hose line(s) can be a jump line, 1 3/4, or booster line (hose reel). The driver operator will ensure that the pressure on this line is as low as possible. Hydrant pressure is usually sufficient. With this setup, it is important to be mindful of water flow direction as random or haphazard direction can potentially saturate interface areas and lead to the interior of the gear getting overly wet. To facilitate gross decon of multiple personnel, additional decon hose lines from other nearby suppression apparatus can be used.

Option—For larger or more complex incidents, the decontamination function should occur in "base" as the facility is described in the National Incident Management System under the oversight of a base manager or logistics section chief. This distinction is important to ensure that contamination is addressed in out-of-service work groups and not transmitted to a staging area where in-service resources are positioned.

GROSS DECON PROCESS

All fire personnel who were exposed to products of combustion shall perform gross decon prior to entering rehab or leaving the incident scene. After exiting the hot zone, it is recommended that crews remain on air, when possible, and report directly to the designated decon hose lines.

Note: Members with the lowest air supply should be decontaminated first, and, as a rule, personnel are to remain on air until gross decon is complete, when possible. Maintaining crew integrity, they shall assist each other in rinsing off debris and products of combustion in a systematic and thorough manner from the collar line down, being mindful of higher potential collection points such as the armpit and groin areas. Personnel shall be careful not to saturate the inner lining of the PPE. The goal is to keep the PPE operationally dry on the interior but rinsed as clean as possible on the exterior. Soft bristle scrub brushes and department-approved soap/cleaner may be used to facilitate the cleaning process. Follow NFPA 1851 and the manufacturers' recommendations when cleaning PPE.

After rinsing the exterior portion of the PPE, personnel may go off air and begin to doff their PPE. Depending on the extent and length of the fire, all PPE, other than bunker pants and fire boots, shall be left in a prepared drop zone. If a formal rehab area is not established due to a quicker knock down or demobilization, a drop zone may not necessarily be needed.

The drop zone shall be located in the warm zone. The drop zone shall be remote and downwind of rehab due to off-gassing PPE. Placement of tarps or salvage covers is suggested to designate this area. Next, personnel shall move away from the exposed gear and toward the cold zone and use department-approved wipes for a gross cleaning of their head, neck, face, hands and any other exposed areas as deemed necessary. The use of running water (a hose bib for instance) with department-approved soap/cleaner (if available) for those same body areas is an optional method for on-scene gross cleaning. This should not be considered a substitute for a thorough "shower within the hour."

Personnel must resist the urge to consume food until the gross decon process is completed and they have entered a clean rehab area (the cold zone).

Reporting to rehab

Personnel that report to rehab shall first go through the gross decon process. Once in rehab, personnel shall lower (or preferably remove if alternative footwear is available) their bunker pants to allow for rapid cooling and increase the distance between off-gassing contaminated gear and their groin and respiratory system.

Reporting for reassignment

When crews are called from rehab back into operations, they shall report ready for assignment as requested. If any new assignment involves further exposure to products of combustion (i.e., overhaul, secondary search, retrieving hose lines, etc.), the crew shall subsequently go back through the gross decon process as stated above.

Release from the scene

To keep the cab of the apparatus as clean as possible and to avoid transferring toxins and harmful products back to the fire station, it is extremely important to perform gross decon prior to leaving the incident scene.

Once released by command and prior to leaving the scene, it is recommended that all PPE be bagged at the scene using department-approved bags that are at least 6 mm thick. The bag opening will be twisted and taped or otherwise closed, then goosenecked (folded over on itself and then twisted and taped) or otherwise closed a second time. This procedure will likely minimize secondary exposures to any off-gassing. When practical, all bags are secured on the outside of the apparatus and not inside the passenger cab.

HELMETS AND EQUIPMENT

Decontamination of the helmet will follow the same objective as all PPE for gross decon. When cleaning the helmet, it's acceptable to carefully wash the exterior to remove any heavy particulate. However, when cleaning the interior, do not saturate any fabric, including the liners, with water. Any interior cloth pieces should be wiped down with department-approved wipes. Removable soft goods may allow more thorough cleaning based on manufacturers' recommendations.

All other equipment (SCBA packs and cylinders, tools, radio straps, etc.) will be thoroughly cleaned using water and any available department-approved cleaner (unless specified below). Soft bristle scrub brushes should be used. Radios shall be cleaned using appropriate techniques, referring to equipment manufacturer's guidelines. Once the equipment is cleaned, it may then be loaded into the apparatus cab. Ideally, no potentially contaminated equipment will be stored in the apparatus cab.

Option (Preferred)—Clean Cab Concept: No equipment that has its designated use for interior firefighting shall be housed, bracketed, or otherwise kept in the interior passenger compartment of any response vehicle. The cab shall be considered a safe, clean place for fire rescue personnel and free of contamination. By establishing a clean cab concept for apparatuses, it reduces any potential secondary and tertiary exposures and establishes a high standard for all to follow.

BACK AT THE STATION

The steps that shall be taken immediately upon arrival at the fire station include, but are not limited to, the following:

- Perform a more thorough decontamination of equipment (radio, tools, fire hose, etc.) following manufacturers' recommendations.
- Perform a more thorough decontamination of PPE (helmet, bunker gear, SCBA, etc.) following NFPA 1851 and manufacturers' recommendations.
- Perform a thorough decontamination of the apparatus cab.
- Return apparatus to a state of readiness.
- Take a "shower within the hour" after being exposed to any products of combustion.
- Change into clean station uniform wear.
- Units that have been approved to go out of service for decon shall be unavailable according to policy.

BEST PRACTICE 4:

After completion of gross decontamination procedures as discussed above and while still on scene, the exposed areas of the body (neck, face, arms and hands) should be wiped off immediately using wipes, which must be carried on all apparatus. Use the wipes to remove as much soot as possible from exposed areas immediately.

As discussed previously, research finds that the neck, face and hands are areas particularly susceptible to soot exposure at fire scenes (J. Stull & G. Stull, 2015). After completion of gross decontamination procedures and while still on scene, the exposed areas of the body (neck, arms and hands) should be wiped off immediately using wipes, which must be carried on all apparatus. Use the wipes to remove as much soot as possible from the head, neck, jaw, throat, underarms and hands immediately. The parts of a firefighter's body that are covered by their protective hood are the easiest places for fireground substances and carcinogens to meet the skin. That's because many hoods lack any type of barrier characteristics to keep out the superfine particles and soot that absorb a variety of hazardous chemicals including carcinogens. This decontamination wipe should be used before the firefighter handles any foods.

There have been concerns regarding what types of wipes should be used and where to get them.

The best takeaways are these:

- **Wipes are effective, but don't replace a shower.** Wipes are an effective tool for immediate decontamination and removal of toxins from the neck and other areas, but they cannot replace a shower. While repeated incident responses or volunteer firefighters returning to work may make this takeaway seem impossible, a thorough shower and hand washing need to be conducted as soon as possible after an incident.
- **Exposures happen anywhere on the fireground.** Exposures can occur even during an exterior attack, and efforts should be made for those doing an exterior attack to keep their hoods on during operations. We must be able to take a wide-angle photo of the incident, recognizing the dangers that all responders face.
- **Reducing exposure starts with prevention.** Reducing exposure to carcinogens is not going to occur with any one method. Prevention has to be an ongoing effort on every scene. Using a strong command process at all incidents will ensure that firefighter safety will be paramount.

BEST PRACTICE 5:

Change your clothes and wash them after exposure to products of combustion or other contaminants. Do this as soon as possible or isolate in a trash bag until washing is available.

POSTFIRE DECON AT THE FIRE STATION

All personnel exposed to the products of combustion, or any potentially harmful chemical or toxins, should complete a full personal decon as soon as possible after the exposure. This includes gross decon as discussed in practice 3, the use of wipes on scene as discussed in practice 4, "shower within the hour" as discussed in practice 6 and properly cleaning all articles of clothing that were exposed.

"Shower within the hour" is a priority. Personnel that are deemed exposed by the incident commander need to be placed out of service until their personal decon is complete. The incident commander should consider exposed personnel as those that performed interior fire attack, primary search, overhaul, roof or ventilation operations and the like. Further consideration for placing personnel out of service should be given to others on the scene. The incident commander should also evaluate other personnel working outside the IDLH environment as they may have been exposed due to wind shift. Showering shall be accomplished with the department-approved soap, if available, with the goal to reduce the absorption rate of toxins into the body. It is extremely important to use, when available, the department-approved wipes and soap for personal decon post fire. These products are not for standard use.

ABILITY TO RESPOND

Back at the station:

Firefighter protective clothing must be kept clean to ensure its proper performance. Turnout clothing needs to be cleaned regularly to prevent any problems. Proper cleaning is important because improper cleaning can destroy clothing or worsen its protective performance.

Research has proven that advanced cleaning is more thorough and must be done at least every year or more frequently, depending on the use and condition of the clothing (J. Stull & G. Stull, 2014). We recommend cleaning every six months or more frequently, depending on the use and condition of the clothing. Advanced cleaning involves hand washing the clothing in a utility sink or machine washing.

In either case, proper procedures must be followed. Machine washing is best done in a front-loading washer/extractor to limit damage caused by top-loading machine agitators. While these can be very expensive for smaller department budgets, using detergents specifically for turnout gear along with water and brushes can work as well.

Proper drying is equally important. As turnout clothing is thick and bulky, drying is slow. Nevertheless, machine drying at high settings will quickly ruin this clothing (even though rated for high-temperature use). If machine drying is selected, be sure to use a no-heat setting.

It is best to hang clothing for air drying inside and away from direct light, especially sunlight. The ultraviolet radiation in sunlight breaks down some of the fibers in turnout clothing. Drying time can be reduced by using a fan with heated air over the clothing.

In some cases, clothing can be contaminated by chemicals or bloodborne pathogens. When this occurs, the turnout clothing must go through a specialized cleaning. Many departments also use contract facilities for cleaning their clothing.

Option: For larger or more complex incidents, the decontamination function should occur in "base" as the facility is described in the National Incident Management System under the oversight of a base manager or logistics section chief. This distinction is important to ensure that contamination is addressed in out-of-service work groups and not transmitted to a staging area where in-service resources are positioned.

Upon returning to the station, all gear that was bagged at the scene shall be removed from the bags. Appropriate PPE and respiratory protection should be followed during this process. The exterior shell shall be further deconned if needed, remembering to keep the inner liners dry and ready for response. The PPE should be hung to dry in a manner that allows for drying as well as good turnout times. Racks with hangers and fans can facilitate and speed up this drying process.

The best option shall be to use extractor washers and commercial dryers as outlined in NFPA 1851 and according to manufacturers' recommendations.

Note: If this occurs during the firefighter's shift, these methods require a second set of PPE.

Should the above options not be available, PPE ensembles should be cleaned as outlined in NFPA 1851 Routine Cleaning and according to manufacturers' recommendations. The PPE should then be hung on a rack to improve drying times and allow for the continued off-gassing. Fans should be used to facilitate this process. Since a proper routine cleaning also involves cleaning the interior liners of the gear, this gear shall be considered out of service until fully cleaned and dried.

If there is not an ability to exchange PPE during the shift, the NFPA 1851 Routine Cleaning of the PPE will occur at the end of the firefighter's shift.

MAINTAINING READINESS

All personnel shall ensure their assigned unit has a clean apparatus cab. The potential for secondary exposures during routine apparatus use is high and must be limited. To aid in reducing secondary exposures, apparatus cabs shall be cleaned and decontaminated (at a minimum) on a monthly basis and more often if call load deems it necessary.

BEST PRACTICE 6:

Shower as soon as possible after being exposed to products of combustion or other contaminants. "Shower within the hour."

The days of arriving back to the station after a fire and having the top concern be to clean the fire apparatus are gone. The most pressing concern upon returning to the fire station is cleaning you. You are the most important tool on that apparatus, and you take the top priority of getting clean. The axes, halligans and pike poles can wait. You cannot!

While cleaning the apparatus and equipment are important, they are inanimate objects. Meanwhile, firefighters have the urgent responsibility to get their skin clean to ensure they are not absorbing toxic carcinogens. On the ride back to the station after the fire, the sweat and water of the scene begin to dry on the duty uniform. As the sweat and water evaporate, so does the thought of getting immediately out of it. Instead, attention tends to shift to what needs to be done to get the apparatus ready for service again. Filling SCBA bottles, cleaning tools, washing hose. Making sure the firefighters are ready for service falls down the list. This is an attitude that must be changed. Getting yourself clean and prepared for the next incident must be the top priority upon returning to quarters.

THE NEED TO SHOWER

Most people are educated to practice good hygiene from the time they are young. There is nothing different about that basic lesson when it comes to being a firefighter. In fact, it is even more important now because of the toxins and carcinogens that may be lurking on the skin. It is extremely important to get these off our bodies as soon as possible. The dirty, sweaty look of a firefighter might be good for television ratings, but it is detrimental to our health and wellbeing in the real world.

If firefighters don't immediately shower after an exposure to carcinogens and toxins, their bodies have a greater opportunity to absorb these chemicals through the skin that may increase risk for contracting occupational cancers. Sometimes these can be seen, such as with soot and charred debris, and sometimes they can't. If you knew you walked into a hazardous materials scene and became exposed to a chemical, wouldn't you wash off the affected area immediately? If your answer is yes, then do the same after a fire.

Firefighters may find it useful to consider every fire a hazardous materials scene with unknown poisons. At each fire scene, chemicals, plastics and other materials may be pyrolyzed and off-gas into harmful chemicals. Those chemicals can be extremely dangerous and must be washed off the body as soon as possible.

HAVING THE FACILITIES

Having showers at the fire station is essential now more than ever. Giving firefighters access to showers upon returning to the station is necessary. If your station does not currently have a shower in addition to bathrooms, consider getting one. There are many options besides doing a full remodel of the fire station. There are portable showers with pop-up walls around it for privacy, and many even have water heaters.

Allowing firefighters to get into their vehicles and return home to shower is not an acceptable practice. This results in firefighters contaminating their vehicle as well as their home. These are places where family members, possibly children, can be exposed unnecessarily. Giving firefighters the opportunity to shower at the station allows them to keep their soiled duty uniform at the station and allows them to clean their bodies as soon as possible.

As stated above, showering must be a high priority upon returning to the station. Incident commanders should consider getting the firefighters that have been exposed the longest in the worst conditions off the scene to clean up first. The concept of "first in, first out" is starting to catch on in terms of decontamination. Incident commanders need to give the firefighters who were exposed to the contaminants during the worst time of the incident the opportunity to decontaminate their skin as soon as possible. Ensure that adequate shower facilities are equally available to all responders, regardless of their gender identity.

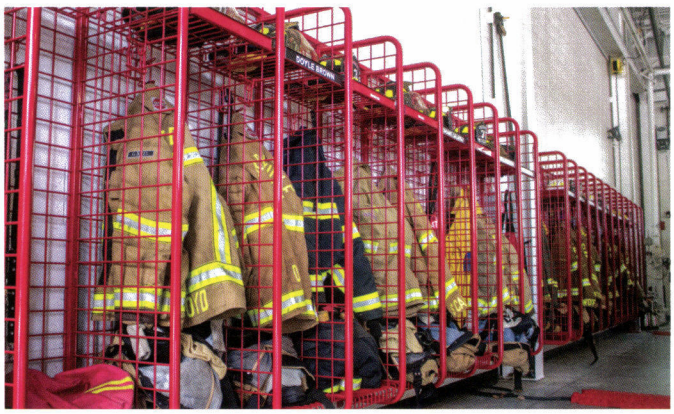
GOING FORWARD

It is one thing to know that showering has critical benefits to firefighters in the fight against cancer and that contaminants need to be washed off the skin as soon as possible. It is another thing to put it into practice. Every department likely has the capacity to make "shower within the hour" a standard operating procedure to which all firefighters need to adhere. If the department already has the facilities to allow members to shower prior to returning home, it doesn't cost a thing except a small increase in the water bill. For those that don't have the facilities, there will be a cost for upgrading the station or purchasing portable showers. In the end, the cost is worth it when it comes to protecting firefighters and avoiding a painful and costly battle with cancer.

The ability for firefighters to shower prior to leaving the station and not carry the contaminants home should be the norm, not the exception. Too many stories are told of firefighters throwing their gear in the trunk of their cars, hopping on their cloth seats in their personal vehicles and driving home to clean up. Allowing that to occur only helps the spread of the contaminants to their vehicles, homes and families. No one wants to put their family at risk unnecessarily. Why not allow firefighters to clean up and change clothes at the station instead of bringing the contaminants home to their families?

BEST PRACTICE 7:

PPE, especially turnout pants, must be prohibited in areas outside the apparatus floor (i.e., kitchen, sleeping areas, etc.) and should never be in the living quarters.



The kitchen and living quarters of the firehouse are not the location to store or wear PPE. It needs to be housed and used in the proper location in the apparatus bay or PPE storage area. This ensures the highest level of safety for firefighters who are assigned or working out of a particular fire facility.

Turnout gear can become contaminated with carcinogens every time a firefighter enters an atmosphere that has fire, smoke and the byproducts of combustion, including but not limited to acrylonitrile, arsenic, benzene, polycyclic hydrocarbons, cadmium, chlorophenols, chromium, carbon monoxide, dioxins, ethylene oxide, formaldehyde, orthotoluide, polychlorinated biphenyls and vinyl chloride (Roman, 2017). Research shows that all of these have either been proven to or are widely believed to cause cancer. That list of words that are hard to spell and even harder to pronounce are enough reason alone not to wear gear anywhere except at an emergency incident. And to be 100 percent safe, even if the turnout gear has been decontaminated, you should not wear it in the fire station, with the exception of the bay, gear storage and decon areas. Simply stated, we should make this a mindset and cultural shift concerning the fire station living areas.

The National Fire Protection Association (NFPA) has set the standard for PPE in NFPA 1851: Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting. Refer to chapter 9 of this standard for proper storage of PPE, in particular 9.1.6. Senior leadership needs to work to instill a standard operating guideline or general operating policy that states, "PPE is prohibited anywhere in the fire station besides the apparatus floor or PPE storage areas." After implementing the new policy, the chief officers must enforce it and hold members accountable if they don't follow the rules. Failing to hold members accountable makes it nothing more than a fancy piece of paper.

The NVFC, in collaboration with the NFPA, released the guide Understanding and Implementing Standards: NFPA 1851 to help volunteer and combination departments implement this standard. A sample SOP is also provided on the NVFC website. These resources are available at www.nvfc.org.

Online searches and training facilities can also provide sample documents and resources to help enforce this best practice. Currently, a large portion of training facilities are requiring firefighters to keep their PPE out of the classrooms and communal areas of their buildings. One agency that currently has a policy on this issue is the Westchester County Department of Emergency Services Training Facility in White Plains, New York. Their procedures explicitly state, "At no time is turnout gear to be worn into the classroom/office building. All turnout gear is to be removed outside of the glass entrance, gray doors, or garage doors. Turnout gear is to be kept outside or on the apparatus floor." (Westchester County, 2018)

BEST PRACTICE 8:

Wipes, or soap and water, should also be used to decontaminate and clean apparatus seats, SCBA and interior crew areas regularly, especially after incidents where personnel were exposed to products of combustion.

Following a fire scene, the apparatus and equipment need to be thoroughly cleaned with appropriate cleansing wipes or soap and water in order to eliminate contaminants and stop continued exposure potential to the firefighters. Each fire incident may be considered a toxic environment, and the apparatus and equipment need to be cleaned in the same way they would after a hazardous materials response.

Decontamination should be conducted immediately following an incident, especially when personnel were exposed to products of combustion. The use of cleansing wipes should also be used regularly to clean apparatus seats, SCBA and interior crew areas. The idea is to capture the areas where toxic substances may linger, especially the equipment and the cab of the apparatus. If these toxins are not eliminated, they may result in further exposure beyond the initial toxic environment and expose other members of our organization. Personal protective equipment should be worn when using the wipes. They have chemicals that deplete the toxic materials but may be full of things that can be easily absorbed by your skin.

Manufacturers of emergency vehicle apparatus have been actively designing new and improved decon enhancements. Some of these features include:

- HEPA air filtration systems for inside cabs that will circulate air, removing contaminated particles
- Creation of non-SCBA seats to help prevent contamination from air packs entering the cab
- Seat surfaces that enhance a cleaner environment inside the cab (this includes vinyl, which is easy to wipe down, or fabrics with antimicrobial and antipathogenic barriers)
- External transverse compartments across the back of the cab to store SCBAs on a pullout board for easier access; transverse body compartments are unique in their availability to do the same within a commercial chassis product
- Exterior compartments for the storage of bunker gear with exterior access only
- Garden hose outlets on pump panels that provide a pressure-regulated and temperature-controlled water supply for gross decontamination of firefighters
- Inclusion of automated dispensing of disinfectant inside the cab, thus reducing first responder exposure to harmful pathogens.

BEST PRACTICE 9:

Get an annual physical, as early detection is the key to survival.

FIND CANCER EARLY

"An ounce of prevention is worth a pound of cure"

Benjamin Franklin

Early detection saves lives. The American Cancer Society (ACS) states, "screening increases the chances of detecting certain cancers early, when they are most likely to be curable" (*Cancer Screening Guidelines*). The overall death rate from cancer in the United States has declined steadily over the past two decades, according to annual statistics reported by the ACS. The drop-in cancer mortality is mostly due to steady reductions in smoking and advances in early detection and treatment (Simon, 2018). Learn more at www.cancer.org/healthy/find-cancer-early.html.

According to a study conducted by NIOSH, firefighters have a 9 percent higher risk of being diagnosed with cancer and a 14 percent higher risk of dying from cancer than the general U.S. population (Daniels, 2017). It is also important to note that firefighters' risks are significantly higher for some specific types of cancer. Due to this, it is especially important that firefighters get an annual physical and make sure their healthcare provider knows of their increased cancer risks. For more information and access to the NIOSH Report, visit https://firefightercancersupport.org/resources/library and https://blogs.cdc.gov/niosh-science-blog/2017/05/10/ff-cancer-facts/.

GUIDELINES AND STANDARDS REGARDING ANNUAL PHYSICALS

The National Fire Protection Association's 1582 standard provides guidelines regarding medical programs for fire departments and recommends annual physicals for prevention of disease. The standard's purpose is to reduce the risk of fire service occupational morbidity and mortality while improving the safety and efficiency of firefighters.

NFPA 1582: Standard on Comprehensive Occupational Medical Program for Fire Departments includes the following direction for departments and personnel:

Chapter 4: Roles and Responsibilities of Fire Departments

4.1.1 The fire department shall establish a comprehensive occupational medical program that includes medical evaluation for candidates and members.

B.4 Coordinating the Medical Evaluation Program. An individual from within the department should be assigned the responsibility to manage the health and fitness program, including the coordination and schedule of evaluations and examinations. This person should also act as a liaison between the department and the physician to make sure that each has the information necessary for decisions about placement, scheduling appointments and so forth.

Chapter 7: Timing of the Annual Occupational Medical Evaluation

7.3.3 The annual evaluation shall be completed every 12 months.

7.4.2 It shall be acceptable for certain components of the annual occupational medical evaluation to be performed by a member's private physician, provided full results are forwarded in the required time frame to the fire department physician.

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RESOURCES TO ASSIST WITH AN ANNUAL PHYSICALS PROGRAM

The IAFC published a comprehensive report on understanding and using NFPA 1582 and the IAFF/IAFC Wellness-Fitness Initiative. Information and sample documents are included to assist with the education and implementation of an annual medical evaluation program. The Emergency Services Road Map to Health and Wellness, available at iafc.org/healthRoadmap provides an in-depth look at issues that firefighters face in regards to cancer and other life-threatening illnesses.

A HEALTHCARE PROVIDER'S GUIDE TO

FIREFIGHTER PHYSICALS

YOUR PATIENT IS A FIREFIGHTER!

www.iafc.org/healthRoadmap

Many firefighters, especially volunteers, utilize their own personal physician to conduct their annual medical evaluation. These healthcare providers may not know the increased risks and challenges firefighters face. The IAFC, in collaboration with Firefighter Safety Through Advanced Research, created the *Healthcare Provider's Guide to Firefighter Physicals* to assist healthcare providers in the evaluation, treatment and ongoing surveillance of the health and wellness of firefighters. The recommendations in this document are supported by ongoing clinical research of firefighters' health and by the extensive experience and expertise of the providers caring for them. These recommendations are offered as assistance for healthcare providers making clinical decisions regarding the medical fitness and treatment of firefighters. Firefighters are encouraged to bring the guide to their next annual physical. Download it at iafc.org/healthRoadmap.

The NVFC "Position on Firefighter Medical Assessments" provides options to assist volunteer and combination departments in establishing an assessment program. The document outlines four different types of annual physicals that could be adopted depending on the resources available to the department and the individual firefighter. This document is available on the NVFC web site at www.nvfc.org/wp-content/uploads/2017/04/NVFC-Position-on-Firefighter-Medical-Assessments.pdf.

The best way to diminish the impact of any disease, illness, or injury is to detect it as early as possible. This is especially true for firefighters who, in many cases, are at greater risk for certain diseases, illnesses and injuries than the general population. To help facilitate an early diagnosis, healthcare providers need to have an increased awareness of the risks and firefighters must have annual physicals to catch any abnormalities.

LISTEN TO THE EXPERTS

From genetics to the environment, many factors affect a person's risk of contracting cancer. Get the facts on what you can do to help protect yourself and your loved ones. Your department and your family depend on you and need you to be the healthiest version of yourself.

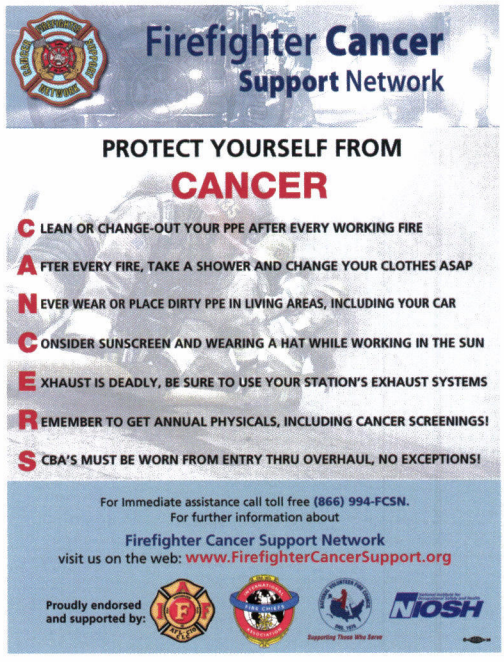
Recognizing your vulnerability to illness is the first step to adopting and implementing a regimen that will support your health as you continue to serve others at their worst time and be there for your family.

Making healthy choices can help reduce the risk of cancer. Here are some tips from the American Cancer Society.

- Stay away from all forms of tobacco.
- Get to and stay at a healthy weight.
- Get moving with regular physical activity.
- Eat healthy with plenty of fruits and vegetables.
- Limit how much alcohol you drink.
- Protect your skin.
- Know yourself, your family history and your risks.
- **Get regular checkups and cancer screening tests. It is also important to follow recommended screening guidelines, which can help detect certain cancers early.**

The Firefighter Cancer Support Network (FCSN) provides assistance and one-on-one mentoring to thousands of cancer-stricken firefighters and their families. FCSN also delivers extensive firefighter cancer awareness and prevention training nationwide.

UTILIZE BEST PRACTICES


Firefighter Cancer
Support Network
PROTECT YOURSELF FROM
CANCER
CLEAN OR CHANGE-OUT YOUR PPE AFTER EVERY WORKING FIRE
AFTER EVERY FIRE, TAKE A SHOWER AND CHANGE YOUR CLOTHES ASAP
NEVER WEAR OR PLACE DIRTY PPE IN LIVING AREAS, INCLUDING YOUR CAR
CONSIDER SUNSCREEN AND WEARING A HAT WHILE WORKING IN THE SUN
EXHAUST IS DEADLY, BE SURE TO USE YOUR STATION'S EXHAUST SYSTEMS
REMEMBER TO GET ANNUAL PHYSICALS, INCLUDING CANCER SCREENINGS!
SCBA'S MUST BE WORN FROM ENTRY THRU OVERHAUL, NO EXCEPTIONS!
For Immediate assistance call toll free (866) 994-FCSN.
For further information about
Firefighter Cancer Support Network
visit us on the web: www.FirefighterCancerSupport.org
Proudly endorsed and supported by:
NIOSH

A best practice is a method or technique that identifies a standard way of doing something that multiple organizations can use and adopt. Volunteer and smaller departments may not have the resources or budget to independently develop a comprehensive cancer prevention program, but there are many existing resources that can be used and easily incorporated.

For example, The Healthy-In, Healthy-Out program includes a manual called *Best Practices for Reducing Firefighter Risk to Exposure to Carcinogens*. Annual physicals are discussed throughout the manual, along with suggestions on how to finance and conduct them. Funding and support for the Healthy-In, Healthy-Out project was provided by the State of Washington's Department of Labor and Industries, Safety and Health Investment Projects.

Washington has also adopted a policy requiring a medical exam for any employee prior to being assigned to work in an area that may release carcinogens. This includes an annual recommended physical for incumbent firefighters. These exams are to be provided at no cost to the employee and provided annually after an initial examination. Specific tests such as red and white blood cell count tests, heavy-metals screenings and cancer screenings may assist with early detection of many common cancers. These simple exams may be able to determine if cancer is a risk or currently present.

If no policy exists at your department, talk to leadership about creating one.

BEST PRACTICE 10:

Tobacco products of any variety, including dip and e-cigarettes, should never be used at any time, on or off duty

Tobacco use has steadily dropped over the past 50 years in the United States according to a report published in 2014 by the Surgeon General. What once was a social norm has seen a steady decline, largely due to efforts to reduce tobacco use based on the research of the health issues it causes. Despite this decline, the CDC still reports that the single largest preventable cause of death and disease in the United States is tobacco use. The healthcare cost from tobacco use of adults in America alone is almost $170 billion (Xu X et al., 2014). Even though it was estimated that in 2016 only 15.5 percent of the adult population smoked, it remains a major health problem (*Smoking & Tobacco Use*, 2018).

The negative health effects of tobacco aren't reserved only for smokers. Tobacco use and the introduction of its chemicals into the body also exist through secondhand smoke, smokeless tobacco and now e-cigarettes, also known as vapor products.

Just some of the chemicals found in tobacco smoke include arsenic, benzene, cadmium, formaldehyde and toluene. Firefighters should recognize these chemicals as things that are dangerous on incident scenes, yet those who smoke are willingly putting them into their bodies. After taking great care to reduce exposure to the cancer-causing carcinogens on scene and taking the steps to decon both our equipment and ourselves, why go against these efforts by willingly ingesting these toxins? The chances of getting cancer increases when the factors encountered on the job are coupled with the risks of cancer related to tobacco use.

The types of cancers caused by the chemicals in tobacco range from cancer of the bladder, cervix, colon, esophagus, kidney, larynx, liver, lungs, mouth, pancreas, rectum, stomach and throat. Most firefighters have seen the effects of cancer, whether on patients to whom they've responded, a fellow firefighter, or even someone in their family. The impact of cancer on the patient's life, finances and family are significant. Why would anyone want to increase their chances of getting this disease?

Change must start with us. Those who use tobacco must take the necessary steps to quit. This will reduce the cancer risk in themselves, their families and those close to them. Departments should also adopt and enforce a no tobacco policy to prevent personnel from using tobacco on department property.

Tobacco use doesn't just impact the user. The National Cancer Institute reports that more than 7,000 chemicals have been identified in secondhand smoke, and 69 of those chemicals cause cancer. In addition, 250 of those chemicals are harmful to our bodies, even to the extent of damaging the DNA (*Secondhand Smoke*, 2011). By using tobacco, spouses, children, friends and fellow department members are exposed to chemicals that can reduce the quality of their life and ultimately decrease their life span. This exposure is something that, often times, they don't have a choice in. Many government entities have passed laws restricting smoking from restaurants and other gathering places. They recognize the harmful attributes of secondhand smoke and have taken steps to protect the public. Shouldn't firefighters seek to equally protect those in their lives they are closest to?

E-cigarettes aerosolize the chemicals into a dense fog of liquid droplets that can penetrate the lungs and thus deliver the chemicals deep inside the body. These devices are currently unregulated by the U.S. Food and Drug Administration (FDA), and their effects are not fully known. However, the liquids usually contain nicotine and may become habit forming. The flavors used in these devices also have many chemicals, which currently have unknown effects as the research is so new.

Quitting is not easy, but the rewards are well worth the effort. There are immediate health benefits to quitting smoking, and those benefits compound greatly over time. Just within a few hours of quitting, the levels of carbon

monoxide decrease in the blood (*Benefits of Quitting*, 2016). As time continues to pass, blood pressure levels begin to move closer to normal, as does one's heart rate. Long-term benefits include lower risks of cancer and heart disease. These benefits can lead to a longer life expectancy. For those already diagnosed with cancer, quitting smoking may reduce the risk of dying, as it helps improve the body's ability to heal.

A support network of both family and friends can help an individual with quitting. If someone else has chosen to quit smoking tobacco, then they could become each other's accountability partners. This helps in providing someone that can offer support during difficult times, and it is someone who will understand the issues with stopping tobacco use. Positive reinforcement from family and coworkers can give a moral boost, and it can assist with one's sense of accomplishment as they reach milestones of being tobacco free. Department members should seek to help and support each other in the quest to be healthier while resisting the urge to shame or guilt someone into better choices. The latter of these usually results in bitter feelings and pushes someone away instead of helping them.

Many employers and their insurance providers offer assistance programs to aid in workers seeking to improve their health. This can be seen as a self-serving goal, but one that can be used to an individual's benefit in working to lead a healthier lifestyle. The benefits to the insurance company are a potential reduction in healthcare cost due to reduced claims from employees choosing a healthier lifestyle. The employers benefit from a healthier workforce by having more productive and reliable employees. The employer could also benefit from reduced health insurance premiums and less lost work time. These insurance premium savings by the employer could be passed on to the employees through a reduction in the insurance cost that they pay.

Several insurers also have rewards programs for quitting tobacco use and maintaining a healthy lifestyle. The insurers may offer an assistance program to quit tobacco use while rewarding the employee with incentives for their progress. These incentives can be a great way of motivating someone, as some programs offer points that equate to gift cards for retail and online stores. The employee wins all around in that they are improving their health, which can lead to a longer lifespan with fewer health issues and less stress, and quitting tobacco could be a boost in their finances with the money they used to spend on tobacco products being saved.

Help with quitting smoking is also available from many other sources. The National Cancer Institute provides several types of assistance. Smokefree.gov provides free, accurate, evidence-based information and professional assistance to help support the immediate and long-term needs of people trying to quit smoking. Additional information is also available from the U.S. Department of Health and Human Services at betobaccofree.hhs.gov. These are only a couple of the many resources that are available for those seeking to stop using tobacco products. The benefits are well worth the effort, not only to the person quitting, but to their family and friends as well.

BEST PRACTICE 11:

Fully document all fire or chemical exposures on incident reports and personal exposure reports.

The adage, "If you didn't write it down, then it didn't happen," is never truer than in dealing with cancer in the fire service. Cancer does not present itself immediately after one is exposed to carcinogens. Thus, years later when the firefighter is diagnosed with cancer, the exact cause or procuring circumstances that exposed the individual to the harmful substances may be a long-forgotten memory. Therefore, it is important to have a process and to follow that process, to attempt to document as much detail regarding potential exposure, no matter the size of the incident or circumstance.

Through documentation, a clearer picture is painted that correlates exposures to the health risks associated with those exposures. This is helpful for departments in identifying risks and implementing changes to minimize those risks. It also gives the firefighter a record that he or she can carry to their physician so that the physician is aware of exposure to any possible cancer-causing carcinogen. It additionally provides a record of exposure that could make a claim for benefits less likely to be denied should any health issues arise in the future in relation to the exposure.

The first step in documentation starts well before a firefighter ever responds to an incident and involves fit-for-duty criteria and the basic outfitting that all departments should have in place for their personnel. This includes annual physicals to ensure that a firefighter is in good health and able to perform the essential functions of the job. This physical can be the baseline that correlates with exposure records to define a recognizable course if a firefighter is diagnosed with cancer. The process of having a regular physical can also lead to early detection and treatment of not only cancer but other potential health issues that personnel face as well, and regular physicals can result in a firefighter maintaining a healthier lifestyle overall.

The second part of the baseline process involves documentation of the firefighter's protective ensemble, the training to properly don and doff that equipment and the proper care for their equipment. While protective gear does not provide a complete barrier to the carcinogens, it is a measure of protection from direct exposure. Documentation in this aspect begins with ensuring that personnel are equipped with properly fitted gear that has been inspected to ensure that the gear is in good condition per the manufacturer's specifications. This will continue throughout the firefighter's entire time with the department and should be maintained after they leave the department per the records retention policy of the agency. It is also important to document the type, construction and age of the equipment.

The greatest amount of documentation will come from on-the-job exposures. While most departments document certain aspects of calls to account for personnel on scene, times of actions and other measurable events, they are generally hard pressed to give an account of everyone's time in the IDLH environment and even more so during overhaul. A clear and concise narrative can account for many details without causing an undue burden on the department personnel. It could include documenting the known or evident materials burned or otherwise aerosolized that could be inhaled or that could come in direct contact with the firefighter. Absorption can come through the skin, and that possibility may be increased during extreme physical exertion.

Scene documentation should begin as part of the basic report. This is what most firefighters are accustomed to, as they complete an incident report for each run made. The basic incident report can account for apparatus times on scene and subsequently times on scene for the personnel staffed on those apparatus, and it can indicate placement of apparatus in relation to the incident, individual assignments and atmospheric or weather conditions. These factors are all important pieces of the fire report, and they can aid in both an investigation of an incident, if it is so warranted, and documentation of potential exposures of personnel on scene.

Tracking exposures of personnel on scene is not limited to those responders in the IDLH hot zone atmosphere. Command and support personnel can be exposed at varying degrees throughout an incident. Previous best practices in this report have covered decon of personnel and equipment, but this process can also be a source of exposure if proper PPE is not worn.

For the responders that are in the IDLH, documentation should be kept as to their roles at the scene. This can be as simple as notating who did what activities in the overall narrative. For example, people performing a search may have a greater exposure to the hand area since their gloves are exposed to contaminants as they crawl on the floor. People outside the IDLH may have exposure to hands, neck and face since they are wearing bunker gear but not necessarily their hoods, gloves or SCBA. A careful job hazard analysis can identify potential sources of exposure for each type of event, and this can be used to aid in the identification of exposures while on scene.

Another part of the scene documentation could come if an investigation is done of the incident. During an investigation, substances that were consumed in the fire may be more accurately identified, and this coupled with the previous scene documentation can provide a more accurate exposure picture. These records could be invaluable to establishing confirmed exposure should a responder develop cancer many years down the road. They can also be part of reviewing how to best protect firefighters in the future.

Despite the burden of seeking to document all the information possible, this should be made a priority. The more data that is available, the better we can help ourselves in the fight against this deadly disease.

Past scene documentation as well as job and workplace hazard analysis can help to identify sources of exposure to carcinogens (or other hazards) that might not be readily apparent. An example would be the process for gear washing after an exposure. After an incident with exposure, gear that has been exposed and thus must be washed needs to be handled in a manner that limits exposure for the person tasked with cleaning the gear. This can be aided by a job description and procedure that minimizes any hazard to personnel. Another exposure could be from diesel exhaust fumes in apparatus bays. Without the presence of a means to filter the exhaust, it becomes an exposure hazard to rescuers and other people in the station. Documentation can be both a means to identify where someone encountered carcinogens as well as a means to justify policy changes and mitigation efforts to reduce the carcinogen hazard.

Remember that the job of documentation begins with the chief to set the example for all to follow.

In order to serve our citizens, we must first take care of ourselves and our responders. Documentation can be viewed as a chore, or it can be looked at as a tool to better the workplace and working conditions and aid in helping treat and assist those that have already been exposed to the carcinogen hazards they routinely face.

Because of the direct connection between the toxins and carcinogens on fire scenes and firefighter cancer, documentation of exposures at all incidents has become a priority in the fight against occupational cancer. Tracking exposures can help firefighters better understand their risks, more effectively communicate these risks to their healthcare provider and provide needed documentation to receive benefits if they contract cancer caused by on-the-job exposures. The First Responder Center for Excellence (www.firstrespondercenter.org/cancer) and the National Volunteer Fire Council (www.nvfc.org) both provide more information regarding

documentation of exposures as well as sample exposure tracking forms that firefighters, chiefs and line officers can use to document incident exposure. Various educational items, instructional tools and standard operating guidelines (SOGs) in the fight against cancer can also be found on these websites.

Tracking exposure data for incidents that firefighters respond to—the frequency, the duration, the time off to recover and the PPE used—can also help to identify patterns. By using either premade forms or purchased tracking programs, these patterns can show levels of probability for developing chronic illnesses from the tasks firefighters face daily, while helping the fire service develop plans to alleviate these illnesses in the future. One example is firstforward.com, which provides online tracking with unlimited records. The need to address exposure tracking through each department's standard operating guidelines is a step in the right direction toward alleviating occupational cancer and providing a healthy, competent response team.

Occupational Exposure Tracking Form

Name: _____ **Agency:** _____

Position: _____ **Unit:** _____

Incident Information

Date: _____ **Time:** _____ **Incident #:** _____

Street Address: _____

City: _____ **Zip:** _____

Incident Type *(Description of this incident)*

- ☐ Structure Fire
- ☐ Car Fire
- ☐ Hazmat
- ☐ Heavy Rescue
- ☐ EMS Incident
- ☐ Investigation
- ☐ Standby
- ☐ Other _____

Personal Protection Equipment *(List of PPE used during this incident)*

- ☐ Helmet
- ☐ Bunker Coat
- ☐ Bunker Pants
- ☐ Fire Hood
- ☐ SCBA
- ☐ Suppression Boots
- ☐ Suppression/Work Gloves
- ☐ Safety Glasses
- ☐ B-95
- ☐ Station Uniform
- ☐ Station Boots
- ☐ Safety Glasses
- ☐ Other _____

Operational Role *(List of roles assumed during this incident)*

- ☐ Interior Fire Operations
- ☐ Exterior Fire Operations
- ☐ Overhaul
- ☐ Interior Investigations/Monitoring
- ☐ Driver/Pumper Operations
- ☐ Standby
- ☐ Other _____

Possible Exposures *(List of potential hazardous materials encountered during this incident)*

- ☐ Products of Combustion
- ☐ Carbon Dioxide
- ☐ Hazardous Materials
- ☐ Construction Debris
- ☐ Airborne Dust
- ☐ Diesel Exhaust
- ☐ Other _____

Signs/Symptoms *(List of signs or symptoms experienced during or after this incident)*

- ☐ Cough
- ☐ Wheeze
- ☐ Sore Throat
- ☐ Head Ache
- ☐ Chest Pain
- ☐ Dizziness
- ☐ Nausea
- ☐ Vomiting
- ☐ None
- ☐ Other _____

Notes: _____

Courtesy Fire Service Occupational Cancer Alliance Tool Kit.

For more information, visit firstrespondercenter.org/cancer

CALL TO ACTION

By

Chief James Seavey Sr., VCOS Cancer Committee and

Past Chief Brian F. McQueen, NVFC Cancer Committee

Over the past five years, our fire stations, printed media and social media platforms have been filled with the issues that we, as firefighters, face with cancer. Cancer is a life-threatening epidemic that needs to be addressed just as much as we address heart and PTSD issues. Statistics on firefighter cancer have shown that firefighters have a 9 percent higher risk of being diagnosed with cancer and a 14 percent higher risk of dying from cancer than the general U.S. population (Daniels, 2017). It may be hard for a lot of people to comprehend the magnitude of the fire service cancer epidemic. You might have even seen the ultraviolet light photos of the carcinogens sitting on your body after a fire. To some, the statistics and photos are unreal or questionable. To us, they are not!

Both of us have been diagnosed with cancer, which may have been attributed to our jobs as career and volunteer firefighters. When an oncologist pulls you into his room and informs you and your loved one that you have cancer, your life changes forever. It goes much deeper than the physical attributes of occupational cancer. Once you gather yourself and understand the serious effects of cancer on your body and on your family, then and only then will you realize that the steps taken during your active duty will be what allows you to fulfill your dreams as a firefighter. Both of us believed that the dirty, salty-looking gear was a badge of courage in our stations. New recruits thought of us as the working firefighters, those who put their lives on the line every day and didn't worry about the way we looked. Never did we realize that wearing SCBA throughout the entire incident, deconning ourselves at the fire, showering after a fire or washing our hoods would be best practices that could have saved us from going through the pain and suffering that we currently face in our treatment processes.

We often share our stories with our colleagues and friends. So often they are intrigued with our stories of our battles with cancer. One critical point we all need to remember is that the health and safety choices that we make as first responders impact not only us, but our crew and those we come home to. We must realize that the healthier we are, the better off we will be for beating cancer. And the more diligent we are in protecting ourselves from carcinogens and toxic exposures, the more we lessen our risks of developing occupational cancer. The best practices covered in this report make us healthier and stronger, and they enable us to be there for our families and our crew.

This Lavender Ribbon Report is a joint effort between the VCOS and NVFC Cancer Committees. It is our hope that you take this call to action as leaders in our fire service, share it with your line officers and embed the "11 Best Practices to Preventing Firefighter Cancer" into your daily standard operating guidelines. The work that you do now will provide a better environment for your firefighters while providing some reassurance to their families that their health and safety is your top concern.

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ADDITIONAL RESOURCES

American Cancer Society:
www.cancer.org/cancer.html

Firefighter Cancer Support Network:
firefightercancersupport.org/

Firefighterclosecalls.com:
www.firefighterclosecalls.com/

FireRescue1:
www.firerescue1.com/cancer/

First Responder Center for Excellence for Reducing Occupational Illness, Injuries and Deaths:
www.firstrespondercenter.org/cancer/

First Responder Center for FSTAR Research:
www.fstaresearch.org/

International Association of Fire Chiefs:
www.iafc.org/

National Cancer Institute:
www.cancer.gov/

National Fire Protection Association:
www.nfpa.org/

National Volunteer Fire Council:
nvfc.org/

Safety, Health and Survival Section of the IAFC:
www.iafcsafety.org/

The National Institute for Occupational Safety and Health (NIOSH):
www.cdc.gov/niosh/firefighters/injury.html

Volunteer and Combination Officers Section of the IAFC:
www.vcos.org

SPECIAL THANKS

JOIN US IN WISHING THE FOLLOWING SPECIAL THANKS FOR THEIR ASSISTANCE IN PUTTING THIS REPORT TOGETHER.

Action Wipes

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The International Association of Fire Chiefs Board of Directors

The National Firefighter Cancer Support Network

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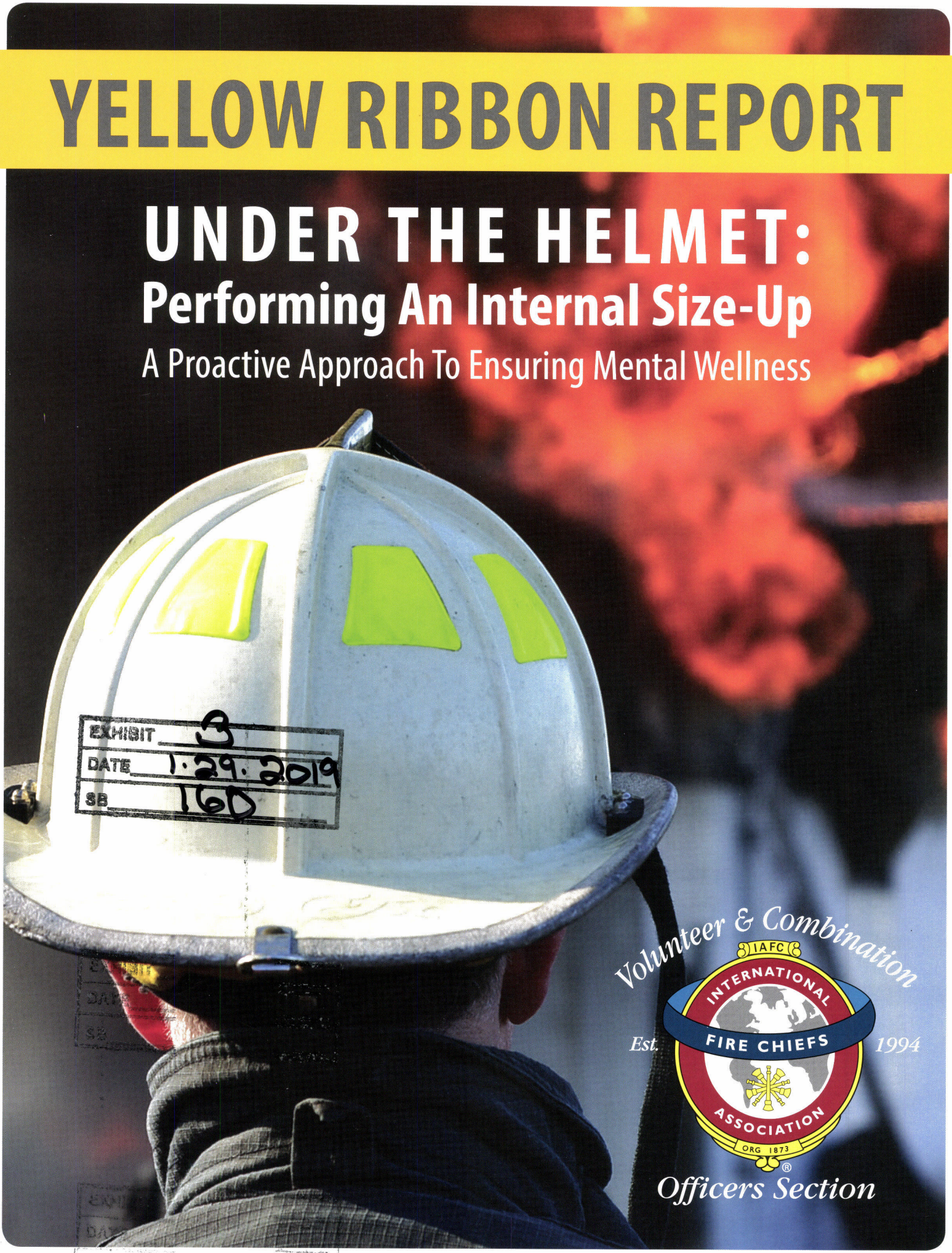
YELLOW RIBBON REPORT

UNDER THE HELMET:

Performing An Internal Size-Up

A Proactive Approach To Ensuring Mental Wellness



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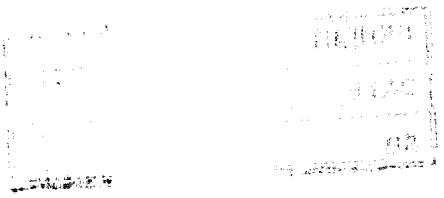

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IAFC INTERNATIONAL FIRE CHIEFS ASSOCIATION ORG 1873
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VCOS MISSION

To provide chiefs and chief officers who manage volunteers within a volunteer or combination fire, rescue or EMS delivery system with information, education, services and representation to enhance their professionalism.

VCOS VISION

To represent the interests of all volunteer and combination fire/rescue/EMS agencies. We will be a dynamic organization, characterized by our integrity, customer focus and membership development, with value placed on people and the superior utilization of technology. We will excel by creating educational programs, through unrivaled networking, and by helping VCOS members further their success and reach their potential.

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Volunteer & Combination Officers Section
of The International Association of Fire Chiefs
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July 2017

Members of the Fire and Emergency Service,

The IAFC's Volunteer and Combination Officers Section always strives to provide resources and information on the most important issues and challenges to volunteer and combination departments and the fire service as a whole. As many of you have seen in news headlines and by talking to your fellow firefighters, we need to improve our focus on responders' emotional health as an industry. We spend so much time helping and saving others, but often forget to focus on one another. As you know, first responders not only have all the "normal" life stressors, but also additional stressors from our public safety role.

The goal of this report is to bring awareness about the fire and emergency services' emotional and behavioral health problem, and emphasize the importance of changing the culture. This report has background information, statistics, resources, and action items for departments to use to ensure the mental wellness of their members. At the very least, I hope this sparks some conversations in your department. We need to start talking about this. It is our duty to take care of each other and our teams.

I want to thank the committee that created this report. The talent, dedication, and passion of the committee members was evident from start to finish. I want to acknowledge Skip Straus, Robin Grant-Hall and Liz Fletcher. The guidance and education they provided to our committee, along with their compassion to assist first responders to understand the value of ensuring mental wellness are priceless. I want to thank John Buckman and Mike Macdonald for tackling the writing and providing direction on this project. To the remaining committee members Jeff Dill, Scott Geiselhart, Tim Pelton, Steve Heitman, Pat Kenny, Scott Kerwood, Jim Wamsley, and Fred Windisch, your contributions and personal experiences added value to assist others to understand the reality of the stresses first responders experience which was the driving force behind this report. I cannot thank you all enough for opening the eyes of many. VCOS thanks the IAFC's Safety, Health and Survival Section for their expertise and partnership on this report as well.

Please put the information in this report to use. Do not just throw it on a bookshelf. Talk about emotional health just like you talk about operational training and readiness. As stated in the report, "It is time we acknowledge and truly understand the ongoing emotional impact on our health and well-being, our lives depend on it."

Respectfully,

Chief Charles Flynn
VCOS Vice Chairman and Yellow Ribbon Report Project Leader

International Association of Fire Chiefs

Providing leadership for the fire and emergency services since 1873

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July 2017

Members of the Fire and Emergency Service,

Now more than ever, it is important that we prioritize taking care of our own members in our departments and ensuring their mental wellness and emotional health. This is a top priority in the fire service and has gained much national attention recently. Too often we hear about first responders suffering from cumulative stress overload that leads to depression, anxiety, substance abuse, addictions, and suicide.

Much like we have a duty to serve our communities, we have a duty to serve one another. We must look out for each other unremittingly, not just on the fireground or at the station. It is imperative that we are able to identify the signs of stress and the behaviors resulting from cumulative stress overload.

I commend the VCOS and the other fire service and research partners that came together to develop this report. Clearly, a great deal of hard and thoughtful work went into this report. Please take the time to read it thoroughly and create your own action plan to implement the ideas shared within. Involve all levels of your organization to get buy-in and show that it is a group effort.

As the report states, "We have a saying in the fire service – risk a lot to save a lot. Isn't it time we do the same for ourselves?" Please keep this in mind and take the extra time to check on members after tough calls. Go the extra mile to really listen to them. It could save their life.

Sincerely,

John Sinclair

Fire Chief John Sinclair
IAFC President and Chairman of the Board

The issue of behavioral health has affected firefighters for many years without much notice. Acknowledging and accepting the mental and physical impact has only recently been recognized as having a short and long-term consequence on the mental wellness of our brothers and sisters, which we in the public safety community are now beginning to admit. It is a duty of ourselves to accept we cannot always deal with the stress that life and public safety brings to bear upon. The impact stress brings to our family, children, friends and colleagues can no longer be ignored. The use of drugs, alcohol and other stimulants to disguise the symptoms must be recognized and action taken. Mental wellness is a necessary attribute for all public safety response personnel. This report provides information for members of the response community on the signs, symptoms and actions necessary to protect ourselves from the stressors.

John M. Buckman, III

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FORWARD

Today, we as a profession need to protect our greatest asset, the men and women who serve their communities as firefighters and first responders. During a presentation at Symposium in the West 2016, Scott Geiselhart and Steve Heitman (both fire service veterans and contributors to this report) presented on the growing number of suicides in fire and emergency service organizations. Scott went into detail of his experiences as a member of his hometown fire department and shared the details of his battle with PTSD and his own suicide attempts. There were approximately 140 attendees during the presentation and for ninety minutes not one person left the room. Many of the veteran and experienced firefighters, fire chiefs and guests dabbed or wiped away a tear as Scott's experience made the statistics real. The IAFC's Volunteer and Combination Officers Section Board of Directors established a panel to explore developing a Yellow Ribbon Report pertaining to the mental wellness of our members and their organizations.

The goal of this report is to bring awareness about the fire and emergency services' emotional and behavioral health problem, and emphasize the importance of changing the culture. The fire service can easily trace its roots back to a batch of rough and tumble folks who—due to lack of tools, research, and education—often relied on courage and brawn to get the job done. As tools improved and we grew collectively smarter, the behaviors we identified as most risky at the time were addressed and eliminated from the industry as they could be. However, many responders still cling to outdated techniques and procedures as either a way of honoring tradition or hazing the new generation with a ritualistic rite of passage. Not long ago, veteran firefighters derided comrades for wanting to put on air packs before walking into a burning structure. Even today, rookies might express their feelings after their first horrific scene, only to be told by the "seasoned veteran" to "Suck it up, Buttercup." Let us be clear, the "Suck it up, Buttercup," mentality is NOT the approach to take.

This report has background information, statistics, resources, and action items for departments to use to ensure the mental wellness of their members. It is our duty to take care of each other and our teams and to remember those who we have lost to behavioral health suicides—it is in their memory that this report is dedicated.

CHAPTER 1: INTRODUCTION

We often hear the public say of us:

> **"They are a different breed—it takes a special type of person to run toward danger while everyone else is running away."**

This statement captures the essence of what first responders do. Whether it be bravery, courage, selflessness, valor, or heroism (with a little excitement and curiosity thrown in), first responders are somehow instinctively "programmed" in their DNA to help and protect others. First responders seem to have a brain that is uniquely wired to respond to crises with an uncanny focus to get the job done, yet the necessary resilience to cope with the resultant exposure to highly stressful situations. First responders are exposed to scenes and situations that are beyond the comprehension and coping capabilities of the average person; they see, hear, and smell what no human being should ever have to experience. It is no wonder that constant exposure to such events can result in cumulative stress that can potentially impact the individual's emotional well-being. The reactions to these stressors and the resulting emotional toll can create behavioral health issues, many times beyond the understanding of the person affected. The manner in which the first responder copes with this cumulative stress can impact one's career, family, enjoyment of life, and overall well-being.

What's in a name? We love labels, particularly the alphabet soup of acronyms that we in fire/EMS use to remember things. In looking under the helmet and conducting an internal size-up, we had to consider what terminology to use—is it emotional, mental, psychological, or behavioral health? The term "emotional health" is used herein since it appears to be the most personalized and least threatening. For example, from a firefighter's point of view, we can imagine the following dialog:

> **"If you say I have a mental health problem that means something is wrong with me and that I'm crazy. The same goes for psychological health, except that probably means more labeling. If you say I have a behavioral health problem then it must be my fault. However, when you say I have an emotional health problem, I can buy that; it sounds less threatening and less permanent, as in I can deal with it if I get help, unlike permanent mental illness."**

For the purposes of this report, we use the term "emotional health" to refer to the impact of cumulative stress overload on the individual. We use the term "behavioral health" to refer to potential downstream behaviors resulting from cumulative stress overload such as anger, avoidance, substance abuse, addictions, and other adverse outcomes, including suicide.

First responders are subject to the same stressors as everyone else—careers, relationships, spouses, children, finances, as well as the everyday hassles of being alive in this world (i.e., traffic, waiting, other people's behaviors). However, in addition to these "normal" stressors, we must deal with the

additional stressors that our role in public safety creates. Every time we go on a call, we have the potential of facing moments that range from dumpster fires and minor traffic incidents to major structural fires and fatalities to unthinkable mass-casualty events. We never really know exactly what we are facing until we are on scene. Additionally, due to the nature of emergency response and the rest of the world's definition of "emergency," we also are called to a seemingly endless stream of non-emergency events, false alarms, public assistance calls, and even repeat-visit medical calls to the same address.

Every first responder on the job has had overwhelming experiences that create a stress-related reaction. It is the responder's reactions to this cumulative stress that can impact the individual's long-term emotional health and well-being.

The variability as well as the frequency of these calls contributes to our stress response, and how we handle this stress is one of the most important contributors to our emotional health and resilience. For imagery, think of pouring water continuously into a bucket; unless the bucket gets dumped out occasionally, it will overflow. Likewise, if our stressors and emotional responses don't get processed, they can cause an overflow in our brains, which is commonly referred to as Post Traumatic Stress Disorder (PTSD). Note that we are not using the PTSD label in this report. There are two reasons for this. First, "Post Traumatic" typically implies that there is a particular trauma in the past that is causing our reactions; this is not necessarily the case in first response since it can be repeated exposures causing this state, rather than one specific event. Second, regarding "Disorder," there is nothing "Disordered" about a first responder's natural reaction to repeated exposure to stressful events. As such, we propose a new term, "Cumulative Stress Overload," which we think is more descriptive and accurate. Cumulative Stress Overload is what happens when first responders, who start with the same everyday stressors as the rest of the world, add to their day an additional layer of extreme stress experienced in the line of duty (there are exceptions, of course: mass shootings, bombings, terrorist attacks, etc).

The fact that these stressors exist is not the problem or issue at hand. There are numerous scientific studies which have identified the brain's physiological response to stimuli in terms of neurotransmitters (e.g., cortisol, epinephrine), as well as other studies on the physiology of the stress response, and current best practices in treatment. **(For a sampling of these studies: http://www.apa.org/topics/stress/index.aspx)** However, these studies are beyond the scope of this report. Rather, the purpose of this report is to shed light on Cumulative Stress Overload and bring awareness to its harmful effects on first responders' emotional health and well-being. In addition to increasing awareness of emotional health, we want to emphasize what can occur when this issue is ignored—potential adverse downstream events such as depression, anxiety, substance abuse, addictions, and ultimately suicide. Furthermore, we want to emphasize the importance of emotional and behavioral health education, suicide prevention programs, reaching out to those needing help *before* they are in a crisis, and changing the culture in the fire service to reduce the stigma and embrace the problem. It is time to acknowledge and truly understand the ongoing emotional impact on our health and well-being; our lives depend on it.

CHAPTER 2: REASON AND UNDERSTANDING

There can be no argument that it is the obligation of every member of the emergency response organization—spearheaded by its leadership—to accept accountability for the safety and well-being of his/her brothers and sisters. This attitude is well ingrained when it comes to physical safety on the fireground; however, it is much less ingrained when it comes to the emotional well-being of our personnel. The overall health (physical and emotional) of each firefighter or medic can determine the health of the entire organization in terms of morale, public perception, recruiting, and retention.

"I asked for help. I begged my brother and sister for help. They ignored my plea. They weren't behaving with malicious intent. They did not know the action to take to help me."

PROBLEM STATEMENT

There is a long-standing avoidance of acknowledging and addressing emotional health within the emergency response community. Whether that problem is currently growing, or whether it has always been there, is debatable. Perhaps, we are now more aware of it or finally being more honest about it. The bottom line is that we, as an industry, do not have a good track record in ensuring emotional health. Instead, we have ignored how such issues impact a person's ability to successfully function on the job with the community and co-workers, and at home with family and friends. Most of all, we have ignored the impact that cumulative stress overload has on our bodies, especially as we age.

It has traditionally been perceived as a sign of weakness to ask for help in dealing with an overwhelming reaction to an incident. Sometimes, responders wait for years to seek help, and then only seek help because they are pushed by a co-worker, friend, or family member. There is a fear of being ostracized by telling our brothers and sisters that we are having a hard time dealing with a call; there is also a fear that if the command staff finds out that we are struggling, that we will be viewed as unfit for service.

ACTION STATEMENT 1:
During recruit school, emotional and behavioral health, as well as dealing with cumulative stress, must become integrated into the initial education.

The dirty secret of our profession is that we are suffering silently, and in many cases the signs and symptoms of emotional health challenges are being ignored. This has to change—we need to wake up and address this issue. Additionally, because first responders are supposed to be tough and able to take it, any sign of perceived weakness can be interpreted as non-compliant. The public safety community, including fire service leadership and elected officials, must recognize the need to address the soft issues as well as technical competencies in personnel development. This will require a significant cultural shift in attitude and action.

BATTLING THE STIGMA

As those who wear glasses can attest, before they got that first set, they assumed their sight was exactly what everyone else saw. However, in that first visit to the optometrist, they suddenly realized things were amiss; after the new glasses went on, they finally saw how things are supposed to look. The brain is similar. We may not know how or why we know something, but we spend our entire life relying on our brain without question. Unfortunately, we don't know how our brain should be functioning, and so we have no basis for comparison. As we discuss in this report, people who are attracted to the emergency response sector and who are good at it, typically have a gift for processing situations and information in a certain way that most others can't—not unlike how an accountant can work math problems in his or her head or a musician can grab a guitar and play a song by ear.

Many seasoned first responders have the ability to handle stressful situations, deal with the unknown, calm excited people, and withstand gruesome scenes while performing heroic acts to save lives, and continue to make rational decisions while others around them are losing their heads. The ability to deal with all these on-the-job stressors, plus all the other parts of daily life everyone else faces, is almost an afterthought because as first responders, that's what we do.

"Roughly 50% of the U.S. population is exposed to traumatic stress, but only 5%-10% develop PTSD" (Ozer et al., 2003, p. 54). Assuming this statistic is accurate, then it might be reasonable to say that 100% of emergency responders are exposed to traumatic stress.

Needs of response personnel in dealing with and/or discussing behavioral wellness issues:

- Trust established
- Confidentiality ensured
- Guaranteed no loss of job or status
- Feel safe and secure
- Able to tell their story without prejudicial judgement
- Able to tell their story without fear of retribution
- Connect with others
- Develop coping skills and resilience

At least that's what we do until the day our internal stress "bucket" becomes full.

The fact is, first responders are human, and although we are wired to deal with difficult situations better than most, we can reach a breaking point. Today, with the emphasis on military veterans returning from deployment, most everyone is familiar with the term "Post Traumatic Stress (PTS)". As discussed

in the previous chapter, we now know that it doesn't necessarily take experiencing combat in a war zone to suffer from PTS symptoms. As first responders, we encounter situations on a daily basis that have the potential to impact us emotionally. This cumulative stress overload can create troublesome thoughts of a particular incident which may be emotionally upsetting and distracting. Since we hate feeling out of control or helpless, we may stuff the feelings down and pretend that everything is OK. Unfortunately, it's part of our tradition—our armor—to discount these feelings; we act as if these calls don't affect us.

SUCK IT UP, BUTTERCUP

There has been little written and minimal education provided to our officers (and to our cadets, our firefighters, and our chief officers) on how to process traumatic calls, and what to do if we are having difficulty dealing with some of these events. Left unprocessed and stuffed down, these emotions can manifest themselves in other ways, leading to anxiety, depression, substance abuse, and addiction. The most severe symptom of our industry's culture related to the chronic cumulative stress overload is the high incidence of suicide as compared to the general population. After years of protecting our fellow man and saving a multitude of lives, this is a tragic ending to such an admirable career. We predict that this statistic will drop significantly if responders protect themselves, take care of each other, and seek treatment to combat the effects of this exciting and gratifying, but stressful vocation. We responders need to be responsible for our emotional health and well-being and that of our brothers and sisters. Our officers need to be committed to the same, as well as reducing the stigma and changing the culture to create a climate where these issues are acknowledged and seeking help is not only encouraged, but expected. When a fellow responder has committed suicide, we have failed.

In many ways, people in the general population do not know how to respond to emotional and behavioral health issues such as depression, anxiety, substance abuse, and addictions. Furthermore, there is a general unfamiliarity with how to address matters surrounding suicide; as such, people tend to overlook (both intentionally and unintentionally) signs and symptoms, and can potentially do more harm than good.

ACTION STATEMENT 2:
Fire departments need to become familiar with emotional and behavioral health issues and methods of reducing their impact on members.

Most fire departments do not have the knowledge and resources to deal with the complex issues surrounding behavioral health and suicide. Often, confronted with the possibility that someone may be suicidal, the opportunity for prevention may be lost, or worse, their suicidal thoughts may be exacerbated by words that may be perceived as condemning. Overcoming the darkness felt by those individuals is a serious challenge to survivability.

When a responder commits suicide, there is frequently little warning or awareness by co-workers that the person's life was in danger. Once we enter the world of darkness fueled by years of traumatic calls and "living" with death, it is difficult to reach out for help. The firefighter's greatest fear is his/her peers and the command staff looking down on him/her and saying things that worsen the person's state of mind, rather than help. As a group, responders rarely reach out for help; the fear of being deemed

unfit and jeopardizing the job and pension and the risk of being judged or scorned often tragically fuels the choice to choose suicide over asking for help.

The fire service can easily trace its roots back to a batch of rough and tumble (mostly) men who—due to lack of tools, research, and education—often relied on courage and brawn to get the job done. As tools improved and we grew collectively smarter, the behaviors we identified as most risky at the time were addressed and eliminated from the industry as they could be. However, many responders still cling to outdated techniques and procedures as either a way of honoring tradition or hazing the new generation with a ritualistic rite of passage. Not long ago, veteran firefighters derided comrades for wanting to put on air packs before walking into a burning structure. Even today, rookies might express their feelings after their first horrific scene, only to be told by the "seasoned veteran" to "Suck it up, Buttercup." **Let's be clear, the "Suck it up, Buttercup," mentality is NOT the approach to take.**

Emotional and behavioral health issues are nothing new to our industry. Unfortunately, we've never been particularly good at addressing them, often leaving our members who needed help the most feeling excluded, isolated, and ashamed. The "suck it up" mentality left those suffering to self-medicate, often turning to self-destructive behaviors such as substance abuse, extramarital affairs, various other addictions, and in the worst cases, even suicide.

The way we view mental wellness as a society has been (slowly) changing, but still our emergency response organizations are hesitant to follow suit. In addition to the tradition of physical and mental toughness, there is a trust issue that is necessary—to believe the person next to you is competent and will protect you at all costs. That is certainly an important belief as people battle life-threatening situations together as a team, but it is not realistic if it does not account for human reactions and emotional limits. In today's environment of reduced staffing for career-staffed departments and declining ranks in volunteer departments, the firefighter is asked to do more with less. A successful team must be able to rely on each member to perform flawlessly under the most trying of circumstances; responders are expected to go from 0 to 60 mph in seconds to react quickly to a situation, and then perform heroically to save lives and protect property during an event they may not have encountered very often.

ACTION STATEMENT 3:

Education programs need to be developed for company officers, as well as cadets and chief officers. Access to this behavioral health education must become part of the professional development process.

Over the years, the fire service has talked about the need for cultural change regarding various issues in the fire service/emergency response sector. The National Fallen Firefighter Foundation has identified the need for cultural change as one of the most important priorities to changing the way the fire service perceives risk and gain. The way we talk about and deal with emotional health issues now leads that list. **As a chief or chief officer, it is incumbent on you to accept personal responsibility for facilitating and maintaining the emotional and physical health of your responders. We need you to recognize and accept emotional wellness as a legitimate obligation for every responder and department—yes, even yours.**

CHAPTER 3: SIZING IT UP

Mental, Emotional, and Behavioral Health have become significant issues in this country in all populations—not just emergency services. For example, according to the National Institutes of Health (NIH), in 2015, approximately 17.9% of adults in the U.S. experienced mental illness (NIH, 2015a), with 4% experiencing a serious mental illness that interfered substantially with or limited one or more major life activities (NIH, 2015b). Regarding depression and anxiety specifically, in 2015, 6.7% of adults in the U.S. experienced at least one major depressive episode (NIH, 2015c); 18.1% experienced an anxiety disorder such as post traumatic stress disorder, obsessive-compulsive disorder, and specific phobias (NIH, 2015d).

Regarding PTSD in particular, Kessler et al. (2005a) found that 3.5% of the U.S. adult population experienced PTSD symptoms within the past year; the lifetime prevalence is estimated at 6.8%. The National Center for PTSD (2016) reports the lifetime prevalence to be 7-8%.

PTSD rates in emergency services have been found to be significantly higher than that of the general public. For example, in a literature review of PTSD in rescue workers, Berger et al. (2012) found a worldwide prevalence of 10%; the rate in the general population from diverse countries varied from 1.3% to 3.5%. Specific to firefighters, several studies have found rates in the range of 20-22% (Beaton and Murphy, 1993; Corneil et al., 1999).

Suicide is the 10th leading cause of death in the U.S., representing 1.6% of all deaths in 2013, according to the American Association of Suicidology (U.S.A. Suicide, 2015). It is the 2nd leading cause of death for people aged 15–34 and the 4th for those aged 35-44, according to the Centers for Disease Control (CDC, 2013). The U.S. Department of Health and Human Services (HHS) states that among adults aged 18 years or older in the U.S., during 2013, 3.9% of the adult U.S. population reported having suicidal thoughts in the past year, 1.1% made a suicide plan, and 0.6% attempted suicide (HHS, 2014). Over a lifetime, rates of suicidal ideation were reported to be 13.5%, rates of suicide planning 3.9%, and rates of suicide attempts 4.6% (Kessler et al., 1999).

In the fire service, these rates are even higher. In a recent study of 1,027 current and retired firefighters, rates of ideation, planning, and attempts were 46.8%, 19.2%, and 15.5%, respectively (Stanley et al., 2015). In a review of the literature on suicide in fire, EMS, and law enforcement, Stanley, Hom, and Joiner (2016) state that while there is a large body of research on suicide in police and emerging research in firefighters, there is a paucity of literature in EMS. However, in the 2015 study mentioned above, the authors found that the firefighters who were in departments that responded to EMS calls were six times more likely to have made a suicide attempt during their careers than those in non-EMS departments.

STRESS: THE GOOD, THE BAD, AND THE UGLY

When we talk about stress, we are almost always talking about life's stressors. However, it is our response to these perceived stressors that causes the release of neurotransmitters (chemicals and hormones) in our body; for example, adrenalin and cortisol ramp us up in response to a perceived stressor. **(For a more in-depth look: http://www.health.harvard.edu/staying-healthy/understanding-the-stress-response)** Stressors are the stimuli that cause these chemical releases—the things in life that put us on alert, scare us, weigh on us, and/or otherwise make us feel we are under pressure. In short bursts, this is referred to as acute stress; we often find this chemical release exciting and enjoyable, such as when we are watching a scary movie or riding a rollercoaster. Other times it is less enjoyable, such as when we hear a loud noise or are startled by something unexpected. This chemical release gives us our "fight-or-flight" reflex, which can be truly life-saving since it helps us maneuver through dangerous situations. When it is triggered, muscles tense, breathing and pulse quicken, digestion stops while the body is pumped with glucose for energy, and the brain increases its demand for oxygen by pumping the heart. Since most of the neurotransmitters are located in the brain and gastrointestinal tract, when the brain hoards oxygen, it causes non-essential body functions to slow down, and explains why we get that "gut feeling."

Once the stressor (or threat) is removed, body systems return to normal. However, if the stressor remains present—problems at work or with family, money, etc.—the body adapts to the increased chemical presence, which leads to chronic stress. The brain gets tired of the constant ups and downs so it chooses to remain ramped up permanently as an adaptation. This is typical for first responders due to the constant reactions to stressors in the line of duty, and is why hanging out at home with family and trying to relax (without the help of alcohol) is often difficult for us. Chronic stress can lead to problems with the digestive, excretory, respiratory, circulatory, and immune systems. Furthermore, stress also causes insulin to be produced for energy, an excess of which causes salt increase, water retention, and deposits of fatty buildup within the arteries. That's why long-term chronic stress can lead to not only mental "burnout," but also serious physical conditions including weight increase, high cholesterol, hypertension, heart disease, diabetes, heart attacks, strokes, and more. It is well known that increased cortisol levels lead to abdominal weight gain; yes, stress makes us fat.

BEHAVIORAL REACTIONS TO STRESS

Physiological and psychological reactions to stress can occur in the short term (within hours or days of a traumatic event) and long term (months to years after one or more incidents).

Common short-term reactions include:

- Emotional responses
- Disrupted sleep or insomnia
- Confusion or lack of clarity
- Denying or minimizing the event's impact on us

These short-term reactions can lead to long-term reactions such as:

- Worry and anxiety
- Lowered frustration tolerance and impatience
- Irritability
- Depression or feelings of numbness
- Denial or minimization of impact
- Sleep problems, insomnia
- Nightmares, night sweats
- Teeth grinding (bruxism) at night or even while awake

Both short-term and long-term reactions can lead to behavioral health problems such as:

- Use of alcohol and/or drugs to "self-medicate"
- Increased risk taking and reckless behavior
- Increased addictive behaviors (gambling, hyper-sexuality)
- Work performance issues or problems functioning
- Suicide

The body's acute stress response in the short term, as well as chronic responses in the long term, can lead to problems. First responders have a "double-whammy" in that they experience chronic exposure to acute stress, resulting in cumulative stress overload, to which we referred earlier. The stress bucket has become full; it is imperative that it be dumped out.

WHEN WE ARE STRESSED:

- **Blood pressure increases**
- **Breathing becomes more rapid**
- **Heart rate increases**
- **Muscles tighten**
- **The digestive system slows**
- **The immune system decreases**
- **Alertness (tension) heightens**

THIS CAN LEAD TO:

EMOTIONAL/BEHAVIORAL ISSUES. Constant stress hormones leads to tension, anxiety, and sleep problems, which in turn lead to headaches, moodiness, depression, and various detrimental behaviors.

WEIGHT GAIN. Cortisol makes you crave fats and carbs, which are likely to add weight to the abdominal area, raising the risk of diabetes and heart disease.

DIGESTIVE PROBLEMS. The slow release of acid doesn't allow the stomach to empty, leading to stomach aches, while a sped-up colon can lead to diarrhea.

HEART ISSUES. Cortisol increases heart rate, blood pressure, and cholesterol levels, thus increasing the risk of heart attacks and strokes.

IMMUNE SYSTEM PROBLEMS. Chemicals that would otherwise be used fight illness are tied up, thus opening the body to colds and infections. Chronic stress has been shown to actually damage immune cells, which lowers our ability to fight infection, cancer, and other illnesses.

Recognizing and dealing with acute stress overload varies highly among individuals. Some people may recognize a change in mood and seek help by talking to others. Others recognize changes in behavior such as increased alcohol consumption, and take steps to reduce or eliminate the behavior, seeking help if necessary. Others may not notice subtle changes in mood and increased self-medication until they are further down the pathway; perhaps they are engaging in addictive behaviors and reckless driving. Still others may not notice a problem at all, and it takes a specific incident at work or a co-worker confronting them about their behavior to make them wake up. Sometimes an individual is so good at hiding behaviors that others are in a complete state of disbelief when an adverse event occurs. For example, sometimes colleagues are absolutely shocked when a fellow first responder takes his or her own life—not only did they not notice any warning signs of suicide, they didn't even know the person was in trouble and headed down that road.

PHYSICAL SYMPTOMS

*Any of these symptoms may require medical attention.

- Chills
- Thirst
- Fatigue
- Nausea
- Fainting
- Twitches
- Vomiting
- Dizziness
- Weakness
- Chest pain
- Headaches
- Elevated BP
- Rapid heart rate
- Muscle tremors
- Shock symptoms
- Grinding of teeth
- Visual difficulties
- Profuse sweating
- Difficulty breathing

EMOTIONAL SYMPTOMS

- Fear
- Guilt
- Grief
- Panic
- Denial
- Anxiety
- Agitation
- Irritability
- Depression
- Intense anger
- Apprehension
- Emotional shock
- Emotional outbursts
- Feeling overwhelmed
- Loss of emotional control
- Thoughts of suicide/homicide
- Inappropriate emotional responses

COGNITIVE/MENTAL SYMPTOMS

- Confusion
- Nightmares
- Uncertainty
- Hyper-vigilance, watchful
- Suspiciousness
- Intrusive images
- Blaming someone
- Poor problem solving
- Poor abstract thinking
- Difficulty with numbers
- Poor concentration/memory
- Disorientation of time, place or person
- Difficulty identifying objects or person
- Heightened or lowered alertness
- Increased or decreased awareness of surroundings

BEHAVIORAL SYMPTOMS

- Withdrawal
- Antisocial acts
- Inability to rest
- Intensified pacing
- Erratic movements
- Change in social activity
- Change in speech patterns
- Loss or increase of appetite
- Hyper-alert or sensitive to environment
- Increased alcohol consumption
- Change in usual communications

TIPS FOR DEALING WITH STRESS

As mentioned previously, short-term reactions to stressful events can lead to long-term chronic stress, which may ultimately lead to emotional and behavioral health problems. It is critical that we be proactive in learning to manage our stress by focusing on habits and practices which foster resilience.

1. **EXERCISE.** Even moderate exercise pays huge dividends. Physically, it helps control our weight, and mentally, it elevates our mood. Cardiovascular exercise, in particular, can be a tremendous stress reliever.

2. **RESPECT YOUR BODY.** Don't smoke, get plenty of sleep, eat smart, and if you drink alcohol, do so in moderation. Do not resort to alcohol and/or drug use as a way to self-medicate to treat stress symptoms rather than seek help. Use caffeine consciously and in moderation. Limit your intake of junk foods that are salty, mostly sugar, and full of trans fats and other harmful chemicals.

3. **BREATHE.** Research shows just five minutes of mindful, deep breathing can make a significant positive impact on our state of mind. Tie it in with yoga, tai chi, meditation, or a massage for even better results. After a stressful call, consciously breathe deeply in and out of your stomach to help alleviate the stress hormone buildup.

4. **TALK IT OUT.** Sometimes just saying the words aloud is enough. Slowing down long enough to have a meaningful conversation also helps. If you feel stress building, talk to someone in your family, a friend, coworker, counselor, religious leader, or with whomever you can open up. Responders understandably don't want to traumatize others with what they have experienced. However, you can talk about your feelings and mention that there was something about a call that really got to you without having to share the details. Your loved ones and friends want to be a part of your lives—don't shut them out.

5. **GET CONTROL OVER YOUR LIFE.** When we feel out of control regarding any aspect of our life, our stress hormones are activated. Think about aspects of your life—your home environment, family life, goals and aspirations, vacation dreams, spiritual or religious life, activities and interests that you've let go of or neglected—and consciously plan and live your life. Living consciously (mindfully) helps us feel in control of our life and future, rather than living in a reactive, powerless manner.

6. **PRACTICE MINDFULNESS.** Living mindfully means living in the present, the here and now—not in the past or the future. An increased awareness of self and paying attention to what is happening in the moment can help us recognize the signs and symptoms of stress in ourselves; it can also help us recognize those signs and symptoms in others so that we are able to reach out and help.

CHAPTER 4: RECOMMENDED ACTIONS

In the following discussion, we make recommendations for taking action to implement changes to combat the impact of emotional and behavioral health on the individual and the organization, as well as reduce the stigma of emotional and behavioral health and change the culture in the fire service.

ACT LOCALLY

National organizations such as VCOS and the IAFC are committed to working with the national and state fire academies and federal organizations to change standards and move the conversation about emotional and behavioral wellness forward. However, in order for these initiatives to gain traction, department leadership must work locally to change the culture at the department level.

The healing and rebuilding process for the individual is an essential component of behavioral health treatment. A similar healing and rebuilding process can have a significant positive impact on the organization as well. Leadership needs to recognize the negative impact of cumulative stress overload and take steps to ensure the well-being of personnel.

CULTURE OF ACCOUNTABILITY

We all know and accept the OSHA "two-in, two-out" policy that says never go into a dangerous situation alone, and that two others are geared up and ready to go inside the hazard area should trouble arise and those in harm's way need assistance. We have significantly improved our track record with accountability on the fireground. However, we are suggesting a different kind of accountability—accountability in establishing an organizational culture that embraces the emotional safety of the firefighter in addition to physical safety. As such, we are suggesting "two-in, *three*-out" to conceptualize the idea of a third person or entity which has the firefighter's back on an *emotional* level. This third entity could be a specific person whose role is to be available (not necessarily literally on scene) for emotional wellness support should the need arise. This individual could be a department ombudsperson, a chaplain, a behavioral health professional, or a peer support team. We are adamant in our practice of establishing a RIT team on the fireground; we need to be just as adamant about the importance of "emotional RIT."

In order to change the culture at the departmental level, leadership must make a strong, visible commitment to ensuring the emotional well-being of everyone in the organization.

- Work to establish an environment where individuals are comfortable discussing emotional health, particularly the bad calls that haunt them. Demonstrate and encourage open and honest communication. Proactively seek ways to address emotional and behavioral health issues *before* they become significant problems. The stigma of emotional and behavioral struggles being viewed as a sign of weakness must be eliminated.

- Officers and command staff should be trained in learning how to be active listeners and approachable to those wishing to reach out for help. These leaders also need to know what to do when someone asks for help—how to talk to the person, and how to ensure that the individual receives the proper care according to the department's protocols.

- Improve awareness of emotional well-being throughout the department. Offer seminars and workshops on emotional and behavioral health and suicide prevention. Many departments are in the process of developing and implementing wellness and fitness programs—make emotional wellness just as prominent as physical wellness.

- "Walk the Talk." It is of critical importance that the command staff and officers demonstrate their commitment to changing the culture through their own behavior—be a role model. The best plan may be developed, but it will never be successfully implemented without demonstration of commitment from the top. If an officer or chief fails to encourage open communication or facilitate debriefing after a bad call, that behavior will set the tone for the rest of the department. Leadership must "walk the talk" even if it means difficult conversations.

EDUCATION AND TRAINING

In addition to a culture that fosters open communication and trust, the organization must establish an awareness of emotional and behavioral health in order to effectively help those who reach out for help. Those in leadership positions need to have adequate training in order to recognize emotional and behavioral health problems, know how to address them, and know how to get the person help. Furthermore, cultural change can only be affected if an awareness of and a commitment to emotional and behavioral wellness permeates the organization—at all levels.

- Develop and implement education for all ranks that promotes emotional wellness, beginning in the academy and continuing throughout all members' careers (or membership tenure for volunteers), even into retirement. Offer programs on stress management, substance abuse, and suicide prevention. Include family members to the extent possible so that they can encourage their loved ones to make healthy choices and to seek out help when needed.

Learning to take yourself lightly and your problems seriously may improve your quality of life only a little, but small changes can have great consequences.

- Include a behavioral health component in officers' professional development courses and other required training.

- Introduce emotional and behavioral health programs/policies from the beginning of employment (or membership) as part of the overall compensation and benefit package. Treat emotional and behavioral health the same as physical health—insurance companies are now required to do that, why can't we? Inform employees of insurance benefit package coverage, policies, and limitations. Include family members in new employee orientation.

- Recognize and understand the impact of emotional and behavioral wellness issues in terms of your agency's recruiting and retention initiatives. Discuss the importance of emotional and behavioral health when recruiting to ensure candidates' expectations are realistic. Conduct exit interviews with those leaving to help determine if there are significant cultural issues in the organization and seek opportunities for improvement.

SUPPORT MODEL AND INFRASTRUCTURE

Departments will choose different models and infrastructures with which to provide emotional and behavioral health support to personnel. Departmental resources, among other constraints, will dictate the choice of approach and method of implementation. In addition to education and training of officers and command staff, it may be helpful to identify a "champion" (an ombudsperson or coordinator) to help develop and implement these initiatives. Someone (preferably *not* an officer) with respect up and down the chain of command would be an ideal choice. This individual should be trained in emotional/behavioral health and suicide prevention/intervention through seminars, courses, and conferences; this training needs to be ongoing and not just a one-time event. Additionally, forming Critical Incident Stress Management (CISM) teams or other peer-support programs throughout the organization can help to reduce the stigma by including more people in development and implementation.

Develop and implement the support system that is best for your organizational culture and infrastructure.

- **Peer-support Program.** Identify those individuals in the department who are well-suited and have the desire to serve in this capacity; these individuals should be trained using known peer-support models (e.g., ICISF classes).
- **Chaplaincy Program.** Chaplains should have education, training, and experience specific to the fire service. Selecting a chaplain who is or has been a first responder is ideal. Consider sponsoring one of your own who has felt the call to go through training to become a chaplain.
- **Employee Assistance Program (EAP).** Ensure that EAP personnel are vetted and have specific education in firefighter culture, exposure to trauma, and the unique experiences that we encounter that can lead to emotional and behavioral health problems.
- **Other Behavioral Health Resources.** Even if your department has an Employee Assistance Program (EAP), it may be beneficial to identify therapists who specialize in working with first responders as an additional resource.
- **Treatment Programs.** Become aware of outpatient and inpatient professional treatment programs which are appropriate for first responders.
- **Other Organizations.** Use the resources from the IAFF Behavioral Health Program, NFFF, Firefighter Behavioral Health Alliance, IAFC, NFPA, NVFC, and others. Additional resources are mentioned at the end of this report.

IMPLEMENTATION

Implementation methodology can determine the success or failure of initiatives; this is especially true for initiatives that depend on a dramatic change in organizational culture in order to be successful. We suggest a "sandwich approach" to implementation, which is a combination of top-down and bottom-up strategies. Specifically, initiatives should be implemented from the top down so that leadership can demonstrate commitment to the importance of the issue, as well as allocate resources for program development and implementation. At the same time, these initiatives also need to be led at the grassroots or bottom-up level so that every member of the organization is involved and has buy-in. Top-down initiatives without simultaneous bottom-up involvement have a long history of failure in corporate America. While we are cognizant of the chain of command in the fire service (top-down), we also recognize the importance of buy-in at every level in the organization. We envision a scenario in which the chief and command staff demonstrate commitment to a behavioral health program, with that program reaching down to the station and company levels. Furthermore, this program should also reach down to the cadets in the academy. There is a parallel to efforts made to improve safety on the fireground—while there is a designated safety officer in place, it is also *everyone's* job to maintain situational awareness and notify command of any potential hazards or unsafe practices.

ACT NATIONALLY

Help us:

- Work toward reducing the stigma of emotional and behavioral health by changing the culture in the fire service.
- Create and contribute to a centralized data collection point for mental health and suicide data. The Firefighter Behavioral Health Alliance (FBHA) is the organization that is currently collecting and tracking these data.
- Recommend that fire chiefs report suicides to FBHA.
- Mandate *anonymous* reporting of critical incidents as well as success stories (like the Firefighter Near Miss Reporting System).
- Develop action plans that are not seen as punitive; firefighters will be much less likely to ask for help if they think their jobs are on the line.
- Define the threshold of behavior that triggers an action requiring counseling.

ORGANIZATIONAL INTERNAL SIZE-UP QUESTIONS

- **How do we get supervisors to stop sticking their heads in the sand?** The responsibility of leadership is to care about the *whole* individual and this includes emotional wellness. Caring requires actions when our brother/sisters are showing signs of cumulative stress overload. This is all about seeking out education and training—not about indifference.
- **How do we get chiefs to accept a paradigm shift in how work performance issues due to cumulative stress overload are addressed and handled?** The manner in which a supervisor discusses this with an employee can have a huge impact on that employee's well-being. Positive approaches utilizing "coaching methods" and performance plans, rather than negative approaches with punishment, need to be included in management training of officers. How do we convince funding sources to budget money for *mental* wellness education and ongoing in-service programs?
- **How do we address the traumatic stress reactions in responders' daily lives?** How do we emphasize that these stress reactions are completely normal and that it is a good thing to talk about these reactions and seek help when needed and not wait until a crisis occurs? Below are some helpful links on stress management.
- **The Mindful Self Express – The Mind-Body Experiment**
  https://www.psychologytoday.com/blog/the-mindful-self-express/201410/find-relief-the-stress-lifes-daily-hassles
- **Stress Management – Using Self-Help Techniques for Dealing with Stress**
  https://www.helpguide.org/articles/stress/stress-management.htm
- **NIH – 5 Things You Should Know About Stress**
  https://www.nimh.nih.gov/health/publications/stress/index.shtml
- **NIOSH-CDC – Stress at Work**
  https://www.cdc.gov/niosh/topics/stress/

THE CHECKLIST

BE PROACTIVE and accept accountability for the emotional well-being of your organization.

- ☐ Address rumors, innuendo, hazing, and harassment issues immediately.
- ☐ Consider debriefings which include a check-in about thoughts, feelings, and emotional reactions after calls.
- ☐ See something, say something. "All firefighters must be empowered to stop unsafe practices" (NFFF 4th Life Safety Initiative).
- ☐ Create a line item within the organization's budget for mental and physical health.
- ☐ Acknowledge that substance abuse could be a problem within your organization and develop a monitoring process.
  - ☐ Add random drug testing.
- ☐ Develop a mental health assessment tool for determining the need for emotional and behavioral intervention.
- ☐ Acknowledge and develop a process that mental health "injuries" should be addressed in a similar manner as a broken arm; once declared fit for duty, it is no longer an issue.
- ☐ Work within the existing organization's culture to eliminate the "suck it up" attitude and remove the stigma surrounding mental illness.
- ☐ Hold debriefings after events (a mental health hot wash similar to an operational hot wash - may be combined to overcome resistance).
- ☐ Provide education on how to conduct and evaluate personnel debriefings.
  - ☐ Learn the technique of leading conversations/proper questioning relating to discussions about stress.
  - ☐ Enhance active listening skills.
  - ☐ Develop a technique similar to structured time out (out of service).

PSYCHOLOGICAL FIRST AID

Contact and Engagement – acknowledge their feelings are legitimate

Safety and Comfort – reassure that you want to help

Stabilization – assure them there is help available and you will help them receive that help

Information Gathering: Current Needs and Concerns – asking the right question in the correct manner that elicits an answer other than yes/no or good/OK

Practical Assistance – the reality of assistance and the effort required to get out of the situation we are currently in

- [ ] Observe and track behaviors on the job.
- [ ] Listen and recognize problems during discussions about behaviors off the job.
- [ ] Develop relevant SOPs/SOGs.
- [ ] Establish the ground rules for discussions about feelings.
- [ ] Promote awareness of availability of qualified resources and support systems.
- [ ] Develop an infrastructure of available resources and best practices.
- [ ] Include local, state, and federal elected officials in an awareness program.
- [ ] Collaborate with local resources.
- [ ] Invest in peer support and chaplain support.
- [ ] Keep retirees engaged and connected.
- [ ] Develop a program to assist individuals with the retirement process and even in the period 6-12 months out from retirement.
- [ ] Identify counselors, chaplains, and therapists in your area who specialize in work-related issues specific to the fire service.
- [ ] Develop a mental health action plan to follow after major incidents.
- [ ] Remember and plan to acknowledge significant anniversary dates of major events.
- [ ] Leaders need to schedule follow-up check-ups after major incidents.

Connection with Social Supports – what support is available to the individual but also to the family

Information on Coping – accepting or being diagnosed with PTSD or other mental health challenges is hard to accept - the person is not the actual diagnosis, and as such does not accept the diagnosis as becoming a definition of the individual

Linkage with Collaborative Services – getting realistic, experienced help as soon as possible

CHAPTER 5: SUMMARY AND CALL TO ACTION

Given our world of increased violence and stressful calls, it is time to acknowledge and accept the need to focus on emotional wellness and resiliency. The repeated exposure to stressful events in the line of duty piled on top of a human being's everyday stressors can have a tremendous impact on first responders. We need to acknowledge this without judgment and we need to provide the support and treatment that our brothers and sisters deserve without fear of being judged or jeopardizing their positions.

Chiefs and their officers at all levels need to be accountable and take concrete action to change the culture and to work toward this goal of improving emotional and behavioral wellness in our people. This cultural change needs to be driven from the top down, with a solid demonstration of commitment from the command staff; it also needs to be driven from the bottom up in a grassroots approach to ensure that everyone in the organization has buy-in. This "sandwich approach" means that chiefs at the top, cadets at the bottom, and station-level officers in the middle must all push for this cultural change. Veteran officers are sometimes the largest instigators of the old way—they need to be the strongest proponents of the new way. Involvement at all ranks is critical to the implementation of any change initiative; we cannot state strongly enough how critical the implementation of this emotional and behavioral health initiative is to the future of the fire service, and the lives of its members and their families.

It is not acceptable for our brothers and sisters to choose this admirable service to society at the expense of their personal lives, as well as the lives of their families—the unspoken victims of this problem. It is time for the macho persona to end. We all know how strong and brave we are, but we need to also acknowledge the incredible stress and burden of being a first responder. It is up to each and everyone one of us to change our culture. We need every officer and chief to jump on board.

We can no longer afford to stick our heads in the sand, to look the other way, to pretend the issues don't exist. We will likely never be comfortable talking about behavioral health and suicide; however, it is our duty to educate ourselves and our departments and develop and implement emotional health and suicide prevention programs. It is our duty to ask the tough questions, have the difficult conversations, and serve as a role model in doing so. Our lives depend on it.

The purpose of this report was to take a stand on this issue, bring a level of awareness to the problem, and emphasize the importance of changing our culture. We have a saying in the fire service—risk a lot to save a lot. Isn't it time we do the same for ourselves?

APPENDIX

WHAT HAPPENS WHEN YOU CAN'T PROTECT THE ONES YOU LOVE?

By Patrick Kenny

How many of us got into the fire service thinking that we are capable of being modern day superheroes, maybe Superman? Don't laugh. Stay with me as you think of what your idea of the profession is all about. Did you join because you want to make a difference or that someday there might be a life present on this earth because of an action you contributed to or maybe even did yourself?

Not so funny now is it? Let's take it to the next level. As chief officers our number one goal is to protect our firefighters so they all go home to their loved ones. In cases where that has not occurred, for whatever reasons, people's careers and lives have been ruined.

I recently attended the Fire-Rescue International (FRI) in Denver where I sat in on three sessions recounting line of duty fatalities; two events occurred here in the United States and the other in the United Kingdom. All left me with the sick feeling of what negative impacts they had on the families of the deceased firefighters, the men and women of those departments and in particular the leaders of those organizations. The chief officers were no longer superheroes but now very much Clark Kent in their abilities to protect against harm's way.

Take it one step further. What if you personally as the chief officer, or someone in your organization, is struggling to protect a member of their immediate family from harm's way? We all have experienced this situation ourselves or know of those in our departments struggling with terminal illnesses of children, spouses or deaths of loved ones. How does that make the involved party feel when they can't protect the very one they loved? The potential for devastation, both personally and professionally, is as powerful as a line of duty death.

The presentations at FRI and my son Sean motivated me to share with you some painful lessons I learned from coming face to face with my own inability to protect someone I loved. I have wanted to write this article for over two years now and have started to do so many times, but always stopped short. Once you realize that you can only wear the cape successfully when the outcome is meant to be, not when you command that you need those lifesaving powers, do you realize just how powerless you truly are. Putting that in writing makes it even more real.

In May of 2004, I stood before those gathered at the annual symposium of the Illinois Fire Chiefs Association to receive their most prestigious award, that of Fire Chief of the Year. In attendance were family, friends, my officers, my wife Eileen and two of our sons Brendan and Patrick. At that same moment, my youngest son Sean was fighting a battle for his life in a drug rehabilitation center hundreds of miles away. He was not allowed to attend the event as he was days away from being released. Only a very few people in the department and practically no one in the audience that day knew the extent of Sean's illness.

I thought if the department knew of Sean's condition, they would have trouble understanding that mental illness had driven him to self medicate and thus become addicted to drugs. How could they possibly understand the whole mental illness concept and its ramifications when my wife and I were living in that environment every day and we felt lost? I knew my fellow chiefs had their own crosses to bear so why add to their plate?

That decision, in hindsight, was a huge mistake. The toll it took on me to try and keep up this "super" façade and the pressure it put on my few confidants, my administrative assistant, my deputy chief and a few trusted friends was, no matter how well intentioned, an error in judgment.

I can tell you what I felt that day of the award and continue to struggle to this day is that I was a fraud and a failure at what was my most important responsibility here on earth, being a father. I would have traded that award, while a wonderful honor, for my son being well. Frankly I would have traded my life for the same deal.

You see for some reason I was one of those people who really believed that I could "save the day". Whether it was my family or my fire department family I could always find a solution. Tell me I couldn't do something and then get out of my way while I proved you wrong! Sound familiar to anybody?

Sean was diagnosed with depression when he was only 5 years old. He lived a fairly normal life until he was entering his junior high school years and then the depression grew darker. By the start of his freshman year in high school he was so depressed he was hospitalized for what would be the first of countless psychiatric ward admittances over the next 6 years. He was subsequently diagnosed with obsessive compulsive disorder which is a disease that torments an individual's mind on a daily, if not hourly, basis. His quality of life was difficult at best.

The mental health system in this country is prehistoric. If you have had the unfortunate experience of dealing with that system either for one of your firefighters or a family member you know what I mean. Insurance coverage is minimal, help many times defined through more medication and authorized visits to a therapist are at a minimum. It is sad to admit but you are far better off to have your firefighter or family member diagnosed with a dreaded physical disease than a mental illness. Both cases reflect horrible situations but only the physical diseases are understood and accepted by the general public.

On June 3, 2006, Sean took his life with an intentional overdose of drugs. Sean had tried every medication known to man with no results other than harsh side effects. He tried all procedures, up to and including an experimental procedure with an implant in his chest just a couple of months before his suicide. We had been to Mayo Clinic nine months earlier where the doctors echoed his willingness to try anything. However, his medical history detailing the lack of success on all these different courses of treatment he had experienced throughout his life left them pessimistic as to his prognosis. My wife and I were told that long-term survival looked remote if a new intervention was not found. Sean finally saw no other choice to escape his pain but to go home to God.

During those years, my wife stayed at home to manage his care. Our whole family made many sacrifices. I kept thinking if I worked harder, taught additional classes on my own time to help pay for those uncovered medical expenses we could find the answer and I would save him. All of a sudden, on that horrible date, I was faced with the cruelest reality; I had failed to protect my son. If I couldn't

carry out that basic task how could I be expected to make decisions in the heat of battle to protect my firefighters?

After the funeral, I sat at home before returning to duty and actually asked myself if there would be a question of confidence from my firefighters as to my ability to lead. Who could blame them? "Is his head going to be where we need it to be"? Maybe it was time to find another profession where the possibility of losing another loved one was not so prominent in my thoughts.

This article is not intended to have you pity me or my family. We all either know of, or are experiencing, similar or worse situation in our lives and/or departments. The key is what are you doing to help those in need of psychological support including yourself?

Many of our states such as Illinois have answered the challenge of responding to firefighters in need immediately after a critical incident through a network of response teams (CISM) throughout the state consisting of highly dedicated trained professionals. You need to know how to contact those teams locally. What resources are available?

My concern speaks more to what is in place for those who suffer either from long-term effects from an incident or the root of the problem has nothing to do with an emergency response, as was my situation. So let's look at some lessons I learned that I hope can be of assistance to you.

The heroic persona of a firefighter naturally leads to the "tough it out" mentality. I can tell you from my experience there is no way to tough out losing your child, whether by accident or illness. As a priest friend of mine put it "you just joined a fraternity no one wants to belong to."

You need to seek professional help. Sure you can try to go back to "normal", whatever that is, but you will find the pain too overwhelming to handle alone. I can say for the very first time after Sean passed I actually had a glimpse of the deep depression he felt every day. The pain is just as real as the most imaginable physical injury one could endure. The same result will occur if there is no professional intervention and that is a deteriorating condition.

The first lesson learned is to find out if you and your department have a therapist you can turn to when faced with mental health concerns? I am talking about someone you have met, not just a name at the end of an employee assistance program business card. Make contact with that therapist and think about inviting them to come in once a year and meet with each shift. Let them meet the people in your department with the goal not to have a group therapy session but rather to get to know what exactly a firefighter does. How about offering ride time to that individual as another tool to benefit all?

I turned to a therapist that knew Sean and even more critical was familiar with the fire service. She made me face my demons of guilt and self doubt with an understanding that my profession and my own "heroic persona" was going to add to my difficulty to mentally begin the healing process. She hit me head on with putting my cape down and realizing not only was I not Superman, I also was not God and both those realities were okay!

Her experience with the fire service was instrumental in opening my heart to hear what she was saying and believing that she actually knew how I felt. As a chief officer you need to seek out mental

health professionals who at least have a basic knowledge of what your firefighters face on a daily basis. If the firefighter feels no connection with the therapist, the likelihood of success is severely diminished. From the therapist viewpoint, I would also imagine it is very difficult to treat someone you do not understand.

One month, almost to the date I lost my son, one of my firefighters had the courage to come to me with a very serious mental health challenge. Unfortunately, I knew exactly what he was struggling with, but more important I knew the trained professional to call. You never know when that call for help might be right outside your door at home or in the station.

The second lesson learned is you can impact how accepting the culture is in your department to deal with those battling mental health issues, whether it's a fellow firefighter or family member. By not sharing with my department to a larger degree my struggles and that of my son, I was sending the message to not talk about mental illness as if it was some dark secret and something to be ashamed of.

I am a big role model guy and here was an opportunity to model this progressive notion that mental health is just as important and real as the physical side. Instead of seizing that opportunity I shied away from it under the rationalization that I was "saving" everyone from that pain. I can tell you the reaction since my son's death has reinforced the notion that many in our profession suffer similar mental health challenges either in their own family or on their fire service family.

If I had been more public about my son's illness, I could have nurtured the culture in a positive way, not only in my department but neighboring organizations, to be open to mental health issues. Now I am not proposing that everyone bears their most private issues at roll call each morning but what I am saying is that the concern for and maintenance of the mental health side of our profession is lagging way behind the physical side. We better wake up and understand that it is a worthy challenger to our firefighters' well-being as well as our own. Just the increase in documented cases of Post Traumatic Stress Syndrome should have our antennae up.

It has been over two years now since I last hugged my son. The road to recovery is ongoing and while painful, I have made great strides. That is in no small part thanks to my faith, my therapist, my wife and sons but also the reaction of the members of the Hinsdale Fire Department and my friends throughout the fire service. From my administrative assistant, Marilyn Forslin, who watched out for my well being, to my Deputy Chief Mike Kelly who only now do I realize how many things never reached my desk until I was ready to handle them; you must have a support group in place. The existence of that support group for you or one of your people is the result of how your organizational culture looks at and reacts to those with mental health issues.

I have prayed to take something positive away from losing my son and so the final lesson learned is the most important and the one my son Sean taught me. Those who suffer from mental health challenges, no matter to what degree, are wonderful and courageous people. They are no more weak or responsible for their illnesses as is someone who is diagnosed with a terminal physical illness. Their disease is not something you can see like a tumor on an x-ray but it is just as real and needs support and treatment. As chief officers we must set up a system to provide help to those in need of treatment.

So I challenge you that if you are the one struggling, take off the cape for a moment and seek out the assistance you deserve. In addition, actively look for qualified professionals familiar with our profession who can provide the support you need personally or for the members of your department. Finally, make sure all know that your department values are clear as to supporting those in need of mental health assistance. You may not be Superman but you can contribute to this world being a little safer for all those you are responsible to care for and protect.

Sean and I both thank you.

I MADE THE CALL TO MAKE THINGS BETTER

By Scott Geiselhart

My name is Scott Geiselhart. I'm a 20-year veteran of the Frazee (MN) Fire Department, a father, an auto repair shop owner… And I am a PTSD, meth, and suicide survivor.

During my time as a firefighter, I had responded to countless calls, including auto extrication and ice water rescue, where I witnessed many deaths and other losses. It was all part of the job. But it affected me. I was angry all the time and yelled at my girlfriend and kids. I was having nightmares, flashbacks, angry outbursts, and was isolating myself! I was doing meth - a line an hour or more so I never would go to sleep and have nightmares! I thought I had a split personality!

In July of 2014, I had enough! I couldn't go on! I was so confused not knowing what was going on in my life! Why was I like this? I had to stop myself from hurting my family! I felt I needed to eliminate myself, they would be better off with me not hurting them! I went to my shop, found my favorite most reliable loaded revolver and put it to my head and pulled the trigger! The hammer came down and just clicked!

I threw the gun down in shock – it had never malfunctioned before. None of the rounds were touched!

I started to type words on my computer keyboard like "nightmares, yelling, flashbacks," etc. in a google search and PTSD filled the screen! I'd heard about PTSD (Post Traumatic Stress Disorder) before, but thought it was just something that affected the military; I didn't even know what the letters stood for.

I couldn't believe it – this condition was treatable! There was help out there. This wasn't something I had to live with forever. I went to tell my girlfriend and kids as fast as I could, but it must have seemed like I'd lost it. I was so excited to tell them I'd found an answer that I was yelling and they were scared of me and wouldn't listen.

I went back to my shop, heartbroken. I didn't know what else to do. I found a number for a suicide hotline, I called 12 times and no one answered. I called three other phone numbers that the fire department had provided, and they were disconnected. I called a police officer friend, and he said they were going to come pick me up. I didn't want to be taken to a mental hospital, so I decided I was going to try a few more numbers and then I was going to make my second suicide attempt. I called a local counseling center and they said they could see me in a week and a half. Finally, I had one last number left to call: 1-888-731-FIRE (3473) – the Fire/EMS Helpline.

Someone picked up right away, and after I told him what happened, he said, "Scott, we've got you."

Finally, someone was there, and understood what I was going through! It was as if they reached through the phone and were holding me in their hands! One of the amazing people on the other end of line was Mike Healy. Mike works with the National Volunteer Fire Council through American Addiction Centers to provide this free, confidential hotline to first responders and their families.

The next day, on Mike's recommendation, I was getting Eye Movement Desensitization and Reprocessing (EMDR) Therapy. EMDR is a type of psychotherapy that helps process negative memories through sounds or movements while you talk about the trauma. EMDR was incredible!

I'm back and loving life - no more nightmares and flashbacks! I walked away from meth and haven't been angry in 22 months! The peace I feel now is awesome! Now I'm able to share my experiences and help others by speaking out and informing emergency responders about PTSD, mental health and suicide awareness and prevention. I want other emergency responders to know if they are struggling, they are not alone and there is help available.

Watch more of Scott's story at https://youtu.be/NEBf_M_Ir18

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RESOURCES

The Chemistry of Stress
https://www.nimh.nih.gov/health/publications/stress/index.shtml

IAFF Behavioral Health Program
http://client.prod.iaff.org/#page=behavioralhealth

Psychological First Aid--Field Operations Guide (2nd Edition)
https://dmh.mo.gov/docs/diroffice/disaster/pfafieldoperationsguide2ndedition.pdf

National Alliance on Mental Illness
https://www.nami.org/Get-Involved/Law-Enforcement-and-Mental-Health

National Fallen Firefighters Foundation
https://www.everyonegoeshome.com
https://www.firehero.org

National Volunteer Fire Council – Share the Load Program
http://www.nvfc.org/programs/share-the-load-program/

The NFPA November 2016 report, "Firefighter Suicide and Behavioral Health are Becoming a Concern to the Fire Service," includes a comprehensive list of resources and links.
http://www.nfpa.org/FFSuicideAwareness

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NCCI WHITE PAPER ON PRESUMPTIVE COVERAGE FOR FIREFIGHTERS AND OTHER FIRST RESPONDERS

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NCCI WHITE PAPER ON PRESUMPTIVE COVERAGE FOR FIREFIGHTERS AND OTHER FIRST RESPONDERS

Executive Summary

In many jurisdictions, workers compensation (WC) compensability rules for firefighters and other first responders have been expanded to account for the potential increased risk inherent in firefighters' employment. As new or revised statutory provisions regarding firefighter presumptions are introduced, NCCI receives requests to estimate the potential cost impacts and consequences of such legislative changes to jurisdictions' WC systems.

NCCI generally expects that the enactment of such presumptions will result in increases in workers compensation costs; however, the extent of such increases is difficult to estimate due to significant data limitations, which include the scope of data reported to NCCI and variation in results of published studies on occupational disease and firefighters.

This paper describes the data limitations, the variety of firefighter presumptions being introduced and/or enacted in certain jurisdictions, including covered diseases and restrictions, and additional considerations when determining the impact of firefighter presumptions on a jurisdiction's workers compensation system.

In this paper, the term "presumption" generally refers to a *rebuttable* presumption; i.e., it may be overcome by evidence to the contrary.

In addition, this paper cites some observations from firefighter cancer claim data reported to NCCI. When observing the number of firefighter cancer claims in a state along with that jurisdiction's statutes vis-à-vis other jurisdictions, it appears that the administration and judicial interpretation of statutes plays a significant role in determining how often firefighters are eligible for and receive WC benefits for cancer.

Note: Most WC presumption laws apply beyond firefighters to an array of first responders, such as police officers and emergency medical personnel. While this paper focuses on firefighters, many of the key issues discussed apply to first responders in general. A summary chart of presumptions for cancer and other diseases for firefighters and other first responders for NCCI jurisdictions is provided at the end of this paper. (For simplicity, throughout the paper we will typically reference "firefighters.") The chart is for WC presumptions only; some states have presumptions for pension and other benefits outside the WC system.

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FIRST RESPONDER PRESUMPTIONS FOR WORKERS COMPENSATION
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Background and Objectives

The idea of providing additional workers compensation benefits for firefighters has been around since the 1970s; however, an increasing number of jurisdictions have proposed and enacted laws over the last decade mandating that firefighters diagnosed with certain diseases be presumed to have contracted such diseases in the course and scope of employment. Typically, in WC insurance, when an employee is diagnosed with a disease or injury, the employee must prove that the disease or injury arose out of and in the course of employment to receive WC benefits. If, however, a statutory presumption of compensability exists, and the worker meets certain requirements, then the employee's injury or disease is presumed to have arisen out of and in the course of employment. Currently, most jurisdictions have firefighter presumption laws for cancer and/or other diseases.[1]

As new or revised statutory provisions regarding firefighter presumptions are introduced, NCCI receives requests to estimate the potential cost impacts and consequences of such legislative changes to jurisdictions' WC systems. Estimating the cost impact of a legislative change to a WC system involves two main components: an estimation of how many new claims are expected to be compensated and an estimate of how much those newly compensable claims will cost. For the estimated cost impact of firefighter presumptions, such approximations have proven to be challenging due to data limitations and varying conclusions in published studies on the link between certain occupational diseases and the firefighting profession. However, despite these limitations, understanding the potential impact of proposed firefighter presumptive compensability is essential because it could result in a significant increase in WC costs for firefighter classifications as well as unintended consequences to a WC system. This study discusses the challenges that arise when estimating the cost impact of firefighter presumption bills and highlights the key issues to be considered when such legislation is proposed.

Data Limitations

There are several data limitations that make it difficult for NCCI to explicitly quantify the cost impact of firefighter presumption legislation. For the data that is reported to NCCI, the main difficulty is that relatively little statistical data on firefighter WC experience is reported because firefighters are primarily employed by municipalities and political subdivisions, which often self-insure their WC exposure. The self-insured market is not required to report data to NCCI, so career firefighter payroll data reported to NCCI only accounts for an estimated 24% of career firefighter (i.e., excluding volunteer) payroll across all NCCI jurisdictions.[2,3] However, these percentages vary widely by jurisdiction.

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[1] Sources: http://www.iaff.org/HS/PSOB/infselect.asp, http://client.prod.iaff.org/#contentid=48598, and https://www.firstrespondercenter.org/cancer/toolsresources/presumptive-legislation-firefighter-cancer-state/. Some of the statutes regarding firefighter presumptions are located under General Provisions or Retirement/ Pension system laws rather than WC laws and may not be applicable to WC.

[2] NCCI jurisdictions include AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD, ME, MO, MS, MT, NC, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, TX, UT, VA, VT, and WV.

[3] Based on the amount of payroll (basic unit of measurement in workers compensation) collected by NCCI compared payroll derived from data reported by the US Bureau of Labor Statistics (BLS). Annual payroll was calculated by multiplying the Occupational Employment Statistics published hourly mean wage by 2,080 hours,

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Another data limitation is the inability to differentiate claims where compensability is determined based on a presumption versus claims where compensability is determined based on general standards. Even if a change in claim filings occurs after a presumption becomes effective, consideration would need to be given to the possibility that a claim deemed compensable under a statutory presumption of benefits may have been found compensable even if the presumption did not exist.

Moreover, many of the occupational diseases typically included in legislative proposals providing presumptive coverage to firefighters have long latency periods. Therefore, it may take a number of years before claim activity associated with firefighter occupational diseases emerges in the data available to NCCI (which is already limited given that many of these risks are self-insured and do not report data to NCCI).

Another resource often used in actuarial analysis is industry data. In the past, NCCI has aimed to quantify the expected number of newly compensable claims resulting from the introduction of a presumption by using incidence rates of certain diseases for firefighters based on external studies and data. The lack of consistently available incidence rates, as well as the variation of conclusions in published studies on the relationship between firefighters and certain diseases, creates uncertainty when considering the potential increased risk of particular diseases among firefighters.

Numerous studies have examined the relationships between the job duties of firefighters, exposure to certain toxins, and contraction of specific occupational diseases. The conclusions of several studies, with varying results, are summarized below:

- In 2009, a study on cancer among firefighters published by the National League of Cities (NLC) found that "there is a lack of substantive scientific evidence currently available to confirm or deny linkages between firefighting and an elevated incidence of cancer."[4]
- In 2010, the International Association of Fire Fighters (IAFF) and US Fire Administration (USFA) jointly published a study focusing on respiratory diseases in firefighters. According to the study, respiratory disease among firefighters "is the result of a career of responding to fires and hazardous materials incidents; it is caused by breathing toxic smoke, fumes, biological agents, and particulate matter on the job."[5]
- A review of literature of non-cancer occupational health risks in firefighters concluded that "none of the sets of papers reviewed showed any consistent association between the occupation of firefighter and any of a number of non-cancer disease and ill-health outcomes."[6]

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consistent with the method used by the BLS. Note that volunteer firefighters, who make up the majority of firefighters in some states, are not included in the analysis.

[4] "Assessing State Firefighter Cancer Presumptions Laws and Current Firefighter Cancer Research," NLC, April 2009, http://tkolb.net/firereports/presumptionreport2009.pdf.

[5] "Respiratory Diseases and the Fire Service," USFA and FEMA, September 2010. Accessible through https://ohsonline.com/Articles/2010/09/16/Report-Examines-Firefighter-Lung-Diseases.aspx.

[6] "Non-cancer occupational health risks in firefighters," Institute of Occupational Medicine, https://academic.oup.com/occmed/article-pdf/62/7/485/4392951/kqs116.pdf, 2012.

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- In 2013, the National Institute for Occupational Safety and Health (NIOSH) published a study that analyzed cancer in career firefighters and concluded that there is a "small to moderate increase in risk for several cancer sites and for all cancers combined."[7]
- A 2017 study of wildland firefighting found increased mortality for lung cancer, ischemic heart disease, and cardiovascular disease.[8]

Due to these data limitations and varying study conclusions, it is difficult to reasonably estimate the expected number of newly compensable claims resulting from a presumption implementation or modification. Additionally, data reported to NCCI yields a very limited number of cancer claims for all occupations, thereby creating further uncertainty with respect to the average cost associated with such claims.

The aforementioned data limitations also apply to other first responder classifications, e.g., police officers who are primarily employed by local governments, which are often self-insured. Moreover, other factors such as the lack of a statistical indicator for claims where compensability is determined based on a presumption, long latency periods of certain covered diseases, and the lack of information on incidence rates create difficulty in estimating the costs associated with enacting a presumption for many first responder classifications.

Variety of Firefighter Bills

Firefighter bills introduced and enacted to date vary significantly with respect to the types of covered diseases and the restrictions that apply to the presumption of compensability. Both aspects will influence the final impact of the firefighter presumption on jurisdictions' WC systems. This section examines the different types of firefighter bills that have been introduced or enacted and analyzes the potential impact that each aspect could have on WC costs.

Diseases Covered

The types of diseases defined as occupational diseases for which the firefighter presumptive coverage applies most often fall into the following categories: cancer, lung and respiratory conditions, blood and infectious diseases, heart and vascular conditions, and mental injuries. The frequency (how often a disease or injury occurs) and severity (WC cost for a disease or injury) of each of these conditions vary significantly, with each playing an important role in the ultimate cost impact associated with such legislation.

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[7] "Mortality and cancer incidence in a pooled cohort of US firefighters from San Francisco, Chicago and Philadelphia" (1950–2009), NIOSH, https://oem.bmj.com/content/71/6/388 (October 2013).
[8] "Wildland Fire Smoke Health Effects on Wildland Firefighters and the Public," FIRESCIENCE.GOV, https://wildfiretoday.com/documents/FirefighterSmokeHealthRisk.pdf (June 2017).

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Cancer

Of the 38 jurisdictions in which NCCI is a rating or advisory organization, approximately 19 have a WC presumption available to firefighters diagnosed with various types of cancer.[9] The specific requirements needed to qualify for the cancer presumption in each jurisdiction play an important role in the ultimate cost of providing such coverage for firefighters.

Several jurisdictions use a broad definition of cancer, such as a cancer that develops when a "person was exposed, while in the course of employment, to a known carcinogen...."[10] The language sometimes used is cancer that is "caused by exposure to heat, radiation, or a known or suspected carcinogen." This language may be considered as somewhat subjective in that a physician or an adjudicator may need to use judgment to determine whether a type of cancer could be caused by something other than the listed exposures if the presumption is contested. In some of the jurisdictions utilizing this language, a determination must be made by the International Agency for Research on Cancer as to the potential for cancer resulting from "suspected carcinogens." Other jurisdictions list the types of cancers presumed to have been related to firefighting.

In general, broad definitions may result in a larger impact on WC costs because there is more room for interpretation compared to a jurisdiction where the presumption provides a comprehensive list of covered diseases. Such potentially subjective language could also lead to increased litigation costs and a possible broadening of the definition of occupational diseases to include diseases that are less likely to result from employment.

The following are key considerations applicable to cancer presumptions:

- The prevalence of cancer varies widely depending on the type of cancer but, in general, cancer is relatively common. According to the American Cancer Society, the risks of developing and dying from cancer are 40% and 22%, respectively, for males and 38% and 19%, respectively, for females.[11]
- Cancer is ranked as one of the most expensive medical conditions per person according to the US Department of Health & Human Services, although the cost of a cancer claim varies widely depending on the type of cancer and the stage of diagnosis.[12] In addition to medical costs, a WC claim may include lost-wage benefits, litigation expenses, and possibly survivor and burial benefits.

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[9] NCCI jurisdictions in which a WC cancer presumption exists for at least one type of first responder as of 11/1/2018: AK, AZ, CO, DC, ID, IL, LA, MD, ME, NH, NM, NV, OK, OR, TX, UT, VA, VT, and WV.

[10] Nevada NRS 617.453.

[11] "Lifetime Risk of Developing or Dying From Cancer," American Cancer Society, https://www.cancer.org/cancer/cancer-basics/lifetime-probability-of-developing-or-dying-from-cancer.html (Last Revised: January 4, 2018).

[12] "The High Concentration of U.S. Health Care Expenditures," Agency for Healthcare Research and Quality, http://www.ahrq.gov/research/findings/factsheets/costs/expriach/index.html

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- Cancer tends to have a long latency period, and the frequency of such claims is difficult to predict. This creates uncertainty regarding the number of claims expected to emerge and the ultimate costs associated with those claims.

Data available to NCCI contains approximately 100 cancer claims occurring since 2004 for firefighters. Approximately three quarters of these cancer claims come from Colorado, Maryland, and Oregon. The following are some of the potential differences in these states that may result in them having the vast majority of cancer claims in NCCI's data.[13]

- In Colorado, C.R.S. 8-41-209, enacted in 2007, is similar to several other presumption statutes regarding restrictions on cancer presumptions. For example, the firefighter must have worked for at least five years and was not known to have cancer when they began work. The presumption could be rebutted if it could be shown by a preponderance of medical evidence that the condition did not occur on the job. However, it has been suggested that Colorado courts interpreted the presumption law inconsistently after its implementation.[14] In 2016, the Colorado Supreme Court opined that the town of Castle Rock was not required to establish an alternate cause for the cancer to overcome the presumption.[15] As a result of this decision, the rate of cancer claims may begin to decline in Colorado; however, this is an area for future research.

- Maryland LE §9-503 provided firefighters a presumption for certain cancers since 1985, and in 2012 the list of cancers was expanded by five, for a total of nine cancers. The presumption of coverage applies even if the cancer manifests itself after retirement.[16] While there is a presumption, it is rebuttable.[17] However, there is anecdotal evidence that in practice, the presumption is very difficult to overcome in Maryland.[18]

- Oregon statute 656.802 as of 2010 provides non-volunteer firefighters employed for five or more years presumptions for twelve types of cancer, and denial of a claim must be based on "clear and convincing medical evidence" or proof that tobacco use "is the major contributing cause." The burden of proof thrust onto employers may be great in practice, since in a non-cancer WC case, the Supreme Court of Oregon decided in *SAIF Corp. v. Thompson* that merely producing medical testimony, i.e., meeting the "burden of production," was not enough; it had failed to meet the

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[13] The high frequency of claims in data available to NCCI for these states does not necessarily imply that these states have the majority of such claims since, as previously noted, data from certain states is of limited availability.
[14] Flewelling, Harvey, "Colorado Supreme Court Clarifies Standard for Firefighter Cancer Claims," https://www.pinnacol.com/news/colorado-supreme-court-clarifies-standard-firefighter-cancer-claims (June 1, 2016).
[15] 2016 CO 26 Supreme Court Case No. 13SC560, *Industrial Claim Appeal Office and Mike Zukowski v. Town of Castle Rock and CIRSA*.
[16] *Montgomery County v. Pirrone*, 674 A.2d 98 (Maryland Ct. Special Appeals 1996).
[17] This was made clear in *City of Frederick v. Shankle*, 785 A.2d 749, n.4 (Maryland Ct. Appeals 2001).
[18] Calvert, Scott and Luke Broadwater, "New firefighter benefits stoke workers' comp debate," http://www.baltimoresun.com/news/maryland/investigations/bs-md-workers-comp-presumptions-20140222-story.html (February 22, 2014).

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"burden of persuasion."[19] In another case, *In the Matter of the Compensation of Leonard C. Damian, II, Claimant*," the Workers' Compensation Board ruled that employer/insurer was unable to rebut the presumption of compensability when there was evidence of some association of cancer and work.

While Texas has a firefighter cancer presumption law, "Over the past six years, more than 90 percent of the 117 workers compensation claims filed by Texas firefighters with cancer have been denied, according to the Texas Department of Insurance."[20] Types of cancer are not enumerated in the statutes, and some critics allege that employers rely on a memo by the Texas Intergovernmental Risk Pool and only presume that three types of cancer are caused by firefighting: testicular, prostate, and non-Hodgkin's lymphoma.[21]

Lung/Respiratory Conditions

Approximately 18 of the jurisdictions in which NCCI is a rating or advisory organization offer presumptive coverage for lung and respiratory (or "pulmonary") conditions, which often include tuberculosis.[22]

The following are key considerations applicable to lung impairment presumptions:

- Chronic lower respiratory diseases are the fourth leading cause of death in the United States, accounting for 5.6% of deaths,[23] and death rates due to lung disease increased by nearly 30% between 1980 and 2014.[24]
- Approximately 9 NCCI jurisdictions limit lung cancer presumptions by explicitly including a non-smokers clause in their statutes.[25] Under a non-smokers clause, in some jurisdictions, a current or recent user of tobacco may not be eligible for the presumption, while in others, there is an absolute bar to eligibility. Although firefighters have a substantially lower smoking rate than the general population, such a clause may serve to mitigate any increase in the frequency of lung disease claims because smoking is a known cause of lung cancer and chronic obstructive pulmonary disease

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[19] Robinson, Thomas A., "Oregon: To Rebut Firefighter's Presumption, Employer Must Meet Both Burden of Production and Burden of Persuasion," https://www.lexisnexis.com/LegalNewsRoom/workers-compensation/b/recent-cases-news-trends-developments/posts/oregon-to-rebut-firefighter-s-presumption-employer-must-meet-both-burden-of-production-and-burden-of-persuasion (August 11, 2016).

[20] "Firefighters With Cancer Often Denied Workers' Comp in Texas," *Insurance Journal*, https://www.insurancejournal.com/news/southcentral/2018/08/15/498134.htm (August 15, 2018).

[21] Ibid.

[22] NCCI jurisdictions in which a WC lung/respiratory presumption exists for at least one type of first responder as of 10/31/2018: AK, AZ, DC, FL, IL, LA, MD, ME, NH, NM, NV, OK, OR, SC, TX, VA, VT, and WV. Also, UT grants a presumption for lung cancer.

[23] Heron, Melonie, "Deaths: Leading Causes for 2016," Centers for Disease Control and Prevention, *National Vital Statistics Reports*, Volume 67, Number 6 (July 26, 2018), https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67_06.pdf.

[24] "Large increase in recent decades in rate of death from chronic respiratory diseases in US," Institute for Health Metrics and Evaluation" (September 26, 2017), http://www.healthdata.org/news-release/large-increase-recent-decades-rate-death-chronic-respiratory-diseases-us.

[25] NCCI jurisdictions with a non-smoking clause as of 10/31/2018: AK, AZ, IN, NH, NV, OR, TX, UT, and VT. WV enacted a non-smoking clause in 2018, but it is for leukemia, lymphoma, and multiple myeloma.

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(COPD), the two most prevalent lung diseases.[26,27] It is estimated that smoking is the cause of 90% of all lung cancer and COPD deaths.[28] The extent to which such mitigation in lung cancer claim frequency occurs would likely be dependent on the employer's or insurer's ability to prove the use of tobacco in order to rebut the presumption.

Blood/Infectious Diseases

In addition to responding to fires, firefighters aid at the scene of traumatic events such as car accidents. Firefighters may be exposed to infectious and bloodborne diseases (communicable diseases) while helping victims of such events. To recognize this increased exposure, approximately 12 of the jurisdictions in which NCCI is a rating or advisory organization offer presumptive coverage for communicable diseases.[29] These presumptions most frequently cover HIV or AIDS, hepatitis, tuberculosis, and meningococcal meningitis.

- In a survey conducted in 2000, the IAFF reported that "1 out of every 50 firefighters was exposed to a communicable disease."[30]
- There are standards set in place by the National Fire Protection Association (NFPA) to control the risk of exposure to communicable diseases,[31] which may reduce the frequency of communicable disease claims in states that have adopted these standards.
- Whereas other diseases may have long latency periods, bloodborne and infectious diseases generally have a much shorter incubation period. A positive diagnosis for most of these diseases can occur within weeks of exposure.
- Whereas other diseases may be caused by any of several factors, bloodborne and infectious diseases typically have only one cause, which is exposure to bloodborne pathogens or airborne particulates from an infected individual. For this reason, it is likely that claims for these types of diseases would not be easily rebuttable by the employer/insurer.

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[26] Poston et al., "A national qualitative study of tobacco use among career firefighters and department health personnel," *Nicotine & Tobacco Research*, June 2012 Issue, http://www.ncbi.nlm.nih.gov/pubmed/22180587.
[27] "Respiratory Diseases and the Fire Service," USFA and FEMA, September 2010.
[28] "Health Effects of Cigarette Smoking," CDC, http://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/ (August 2013).
[29] NCCI jurisdictions in which a WC blood/infectious disease presumption exists as of 10/31/2018: CO, DC, FL, IL, LA, ME, NM, NV, OK, TX, VA , and VT. UT's presumption is only for emergency medical services providers. In AL, the presumption is implied, and the firefighter must demonstrate that he or she was exposed to AIDS or hepatitis while in the line and scope of his or her employment.
[30] "2000 Death and Injury Survey," IAFF, http://www.iaff.org/hs/PDF/2000%20D&I.pdf.
[31] "NFPA 1581," National Fire Protection Association, http://www.iaff.org/hs/Resi/infdis/Infectious_Diseases.htm (2004).

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Heart/Vascular Conditions

Approximately 19 of the jurisdictions in which NCCI is a rating or advisory organization offer firefighters presumptive coverage for heart and vascular conditions.[32] These presumptions typically cover hypertension and heart disease.

In general, determining work-related compensability of a heart condition is a complex issue because heart conditions are progressive in nature and can be caused by a preexisting condition or several other non-work-related factors, such as personal lifestyle and family history. It is even more difficult to connect a heart condition with employment if an event or series of events requiring unusual physical exertion or causing mental stress did not immediately precede the heart condition.

The statutory requirement in a handful of states also includes a restriction that unusual physical exertion or mental stress causing the heart condition must be outside of the normal duties of the occupation for the condition to be deemed compensable. Therefore, much of the physical exertion and stress associated with firefighting may not qualify as being outside of the normal duties of the occupation. In states that do not require the events that cause the heart condition to be outside of the normal duties of the occupation, linking a heart condition to employment may be easier for firefighters.

Firefighters may be less likely than other employees to have preexisting heart conditions because, in order to be hired, they are often required to pass rigorous health and physical examinations. The introduction of a heart presumption will make it easier for firefighters to receive heart-impairment-related benefits by shifting the burden of proof from the employee to the employer. However, due to the physical exertion and stress associated with the firefighting profession, heart-related injuries may already have been compensated through general WC compensability standards, and an impact to WC costs may therefore be less prominent in this disease category than in other categories such as cancer and lung impairments.

The following are key considerations applicable to heart presumptions:

- This category of disease is prevalent among firefighters. Sudden cardiac death (usually from a heart attack) was the most common cause of on-the-job fatalities in the firefighting occupation in 2017, accounting for about half of the fatalities.[33]
- Heart-related injury presumptions in some jurisdictions are restricted, such as a requirement that the heart impairment must occur within 24 or 72 hours of service in the line of duty for the presumption to be applicable. While these types of claims may already be compensated through general WC provisions, the introduction of such a presumption could result in additional claims being compensated because firefighters who would not otherwise have associated their heart disease with their employment may be motivated to file a claim under WC.

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[32] NCCI jurisdictions in which a WC heart/vascular condition presumption exists for at least one type of first responder as of 10/31/2018: AK, AZ, CT, DC, FL, IL, LA, MD, ME, NH, NM, NV, OK, OR, SC, TX, VA, VT, and WV.

[33] "Firefighter Fatalities in the United States—2017," National Fire Protection Association, https://www.nfpa.org/-/media/Files/News-and-Research/Fire-statistics-and-reports/Emergency-responders/osFFF.pdf (June 2018).

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Mental Injuries (PTSD and Other)

Post-traumatic stress disorder (PTSD) and other mental injuries are not commonly compensable in WC but may be on the rise.[34] At least 23 NCCI jurisdictions currently recognize "mental-mental" injuries (a mental injury or disability that arises without a physical injury) as being compensable. Two states currently recognize such injuries only for certain occupations—firefighters and police officers in Connecticut and first responders in Florida.

Maine[35] and Vermont recognize mental-mental injuries for all occupations, but offer presumptive coverage only to firefighters, police officers, and EMTs.

In the last three years, several states have considered adding first responder presumptions for mental injuries, including Missouri, New Hampshire, and Utah (although the word "presumption" does not appear in the various versions of the failed legislation, Utah House Bill 209).[36]

In 2018, Florida changed the evidentiary standard for a first responder PTSD injury from "clear and convincing evidence" to "a preponderance of the evidence," but did not grant a presumption.

Presumptions Amongst the Types of First Responders

Most states that offer presumptive coverage to firefighters also offer similar coverage to other first responders. Presumptive compensability for other first responders is more often applicable to heart conditions, lung impairments, and infectious diseases than to cancer. The nature of employment for firefighters generally differs from that of other first responders and, as such, the risk of contracting certain occupational diseases may differ between firefighters and other first responders.

However, unless explicitly stated in relation to firefighters, the key factors addressed above regarding the frequency and severity of covered diseases and the mitigating effect of restrictions on the frequency of compensable claims would also affect the ultimate cost associated with the introduction of a presumption applicable to other first responders.

Restrictions

Many states place limitations on the applicability of a presumption or allow for a presumption to be rebutted under certain circumstances. Restrictions that are placed on a presumption, such as tenure requirements and age limitations, serve to narrow the scope of firefighters to whom the presumption would apply. The creation of such restrictions may partially mitigate the expected increase in compensable claims resulting from a presumption. The extent to which this mitigation may occur is dependent on workforce demographics and the employer's or insurer's ability to rebut a presumption, though it may also lead to increased litigation.

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[34] Spidell, Bruce, "Post-Traumatic Stress Disorder in Workers Compensation," NCCI, https://www.ncci.com/Articles/Pages/II_Insights-PTSD-Injuries.aspx (June 14, 2018).

[35] Maine's statute implementing the presumption states that it is repealed on 10/1/2022.

[36] The introduced and amended versions of HB 209 proposed adding first responder language to 34A-2-402. Meanwhile, the substitute version would have established a working group to study first responder WC mental stress claims.

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Service Requirements and Time Limitations

Many presumptions require a firefighter to serve a minimum number of years to qualify for presumptive coverage. The most typical service requirement is that the firefighter must have served a minimum of 5 years to qualify for the presumption, but the service requirement can range from 2 to 12 years and vary by the type of disease. To the extent that firefighters have less than the required number of years of service at the time such a disease manifests, these requirements could serve to limit the number of claims filed under a presumption. It is expected, however, that age is correlated with years of service; and since the risk for many of the occupational diseases covered by presumptions increases with age, the service requirement may only slightly mitigate an increase in the number of compensable claims due to a presumption. The long latency period of many diseases may also mitigate the impact of a service requirement.

Another way that states seek to limit the applicability of a presumption is by placing time limitations on the number of years following retirement or termination in which a firefighter can file a claim, for which a presumption of coverage would otherwise apply. This restriction can be specified as a set number of years or can fluctuate depending on the tenure of a firefighter.

Age Restrictions

Some presumptions place age restrictions on the applicability of certain diseases. Age restrictions can significantly influence the number of newly compensable claims resulting from a presumption because the general risk of contracting many occupational diseases tends to increase with age.

The following are a few examples of age restrictions on firefighter presumptions:

- In Maine, the presumption is not applicable for cancer in retired firefighters diagnosed beyond 10 years of their last active employment or after age 70, whichever occurs first.[37] This restriction could result in fewer cancer claims being presumed compensable.[38]
- In New Mexico, the presumption is not applicable for testicular cancer diagnosed after age 40.[39] This restriction could result in fewer claims being presumed compensable because about half of all firefighters are over the age of 40.[40]
- In Oregon, the presumption is not applicable for prostate cancer diagnosed after age 55.[41] This restriction could result in fewer claims being presumed compensable because the median age of diagnosis for prostate cancer is 66.[42]

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[37] Title 39-A, §328-B:5.
[38] For example, the median age for diagnosis for colorectal cancer is 67. See "Cancer Stat Facts: Colorectal Cancer," National Cancer Institute, http://seer.cancer.gov/statfacts/html/colorect.html.
[39] 52-3-32.1.B.8.
[40] "US Fire Department profile 2012," National Fire Protection Association (October 2013), http://tkolb.net/FireReports/2013/US_DeptProfile2012.pdf.
[41] 2017 ORS 656.802(5)(d).
[42] "Cancer Stat Facts: Prostate Cancer," National Cancer Institute, https://seer.cancer.gov/statfacts/html/prost.html.

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- In South Carolina, the heart and respiratory presumption is not applicable for firefighters over the age of 37.[43] This could mitigate any increase in newly compensable claims based on the presumption since the risk of heart attack rises significantly in men over 45 and women over 55.[44]

Health Evaluations

Many firefighter presumptions require a preemployment health examination to determine the employee's eligibility for those presumptions. The intent of this requirement is to prohibit coverage for diseases that were contracted prior to employment as a firefighter.

While this requirement may limit the number of claims eligible for the presumption, the examination's cost and its ability to detect the presence of an occupational disease both need to be considered when weighing the advantages of the requirement. For example, a general physical examination may not be successful in identifying cancer or heart disease at an early stage.

In Vermont, initial cancer screenings prior to employment, and any subsequent cancer screenings recommended by the American Cancer Society, must be conducted to be eligible for the cancer presumption.[45] Specialized screenings may more accurately detect diseases at an early stage, which would limit the number of compensable claims eligible for a presumption (by determining if a disease was contracted prior to employment) and may decrease the cost of compensable claims (because occupational disease diagnoses at an early stage may be less severe).

On the other hand, the health screenings and physical examinations may be costly to employers, and some screening tests have health risks that need to be considered.[46] Additionally, when a presumption is introduced, the preemployment examination requirement would likely not apply to currently employed firefighters who were not required to complete a physical examination prior to employment.

Rebutting a Presumption

Presumptions for cancer and other diseases for firefighters and other first responders are generally rebuttable. The following are a few examples of statutory language concerning rebuttals:

- In Alaska, "This presumption of coverage may be rebutted by a preponderance of the evidence. The evidence may include the use of tobacco products, physical fitness and weight, lifestyle, hereditary factors, and exposure from other employment or nonemployment activities."[47]
- In Indiana, the statute simply states, "The presumption ... may be rebutted by competent evidence."[48]

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[43] §42-11-30.(A).
[44] Nordqvist, Christian, "How to spot and treat a heart attack," MedicalNewsToday.com, http://www.medicalnewstoday.com/articles/151444.php (July 26, 2017).
[45] 21 V.S.A §601.(11)(E)(i).
[46] For example, colon cancer screening can cause tears in the lining of the colon. See "Cancer Screening Overview (PDQ®)–Patient Version," National Cancer Institute, http://www.cancer.gov/cancertopics/pdq/screening/overview/patient#Keypoint3 (April 25, 2017).
[47] §23.30.121.(a).
[48] IC 5-10-15-9.(b).

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- Similarly, in Louisiana, "This presumption shall be rebuttable by evidence meeting judicial standards."[49]
- In Texas, "A presumption ... may be rebutted through a showing by a preponderance of evidence that a risk factor, accident, hazard, or other cause not associated with the individual's service as a firefighter or emergency medical technician caused the individual's disease or illness."[50]

Additional Considerations

In addition to the issues and key considerations mentioned thus far, there are several other factors that may directly or indirectly affect the outcome of a firefighter presumption. The remainder of this paper discusses various topics associated with firefighter presumption bills and additional matters to be considered when evaluating the impact of such presumptions.

Applicability to Volunteer Firefighters and Non-First Responder Occupations

In certain states that have enacted firefighter bills, the statutes explicitly exclude volunteer firefighters from the presumptive coverage that is offered to career firefighters.

Also, extending presumptive coverage to volunteer firefighters makes quantifying the cost impact of a firefighter bill substantially more complicated. The following questions outline some of the complexities associated with quantifying an impact to volunteer firefighter classifications:

- How many volunteers are covered under WC insurance? WC coverage is not always required for volunteer firefighters as it is for most other occupations. Industry benchmarks on the number of volunteer firefighters cannot be relied upon in states where coverage is optional. Historically, a minimum payroll basis of $300 was generally utilized for volunteer firefighters on an insurance policy. However, due to exceptions to this imputed value, lack of consistent application, and the possibility that actual volunteer payroll may exceed the minimum, this measure cannot always be used to estimate the number of volunteer firefighters covered under WC insurance.
- Are volunteers exposed to the same level of risk as career firefighters? Volunteer firefighters may have lower levels of exposure to carcinogens and occupational diseases in general if they work a smaller number of fires than career firefighters. The number of hours worked by volunteers is difficult to estimate because this information is not well-defined and is inconsistently tracked.

In general, there may be sizeable characteristic differences between the volunteer and career firefighter populations in a state. As mentioned earlier, it is difficult to reasonably estimate the potential cost impact of a firefighter presumption that covers career firefighters. For the reasons shown above, it is increasingly more difficult to estimate the impact of a bill that extends coverage to volunteer firefighters as well.

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[49] RS 33:2011.A.
[50] §607.058.

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Potential Shifts in Coverage

A potential unintended consequence of enacting a firefighter presumption bill is that because of the uncertainty of future losses, fire departments that don't self-insure their WC exposure may not be able to find coverage through the voluntary insurance marketplace. As a result, fire departments and the municipalities that employ them may have to seek insurance through the residual market or through an alternative insurance mechanism such as a state WC fund.

An example of this unintended effect is the 2011 establishment of a cancer presumption for volunteer and career firefighters in Pennsylvania known as Act 46. Testimony by the Pennsylvania State Association of Township Supervisors indicates that "most providers had announced that they were dropping workers' compensation coverage for firefighters due to the potential cost and liability exposure imposed by Act 46."[51] Based on data collected by NCCI, a similar effect appears to have occurred in Vermont because there was a substantial increase in the number of fire departments insured in the residual market after the enactment of firefighter presumptions in that state.[52]

Impact of the Judicial Environment

As noted in the discussion of the prevalence of firefighter cancer claims from certain states in NCCI's database, the impact of a firefighter bill may also be influenced by the judicial environment in a state and the interpretation of the statutory presumption by adjudicators. Following the enactment of a firefighter presumption bill and before case law is established, an increase in litigation is often anticipated because employers and insurers attempt to rebut the presumption where appropriate. Insurers and self-insured employers may use the argument that there is no strong indication that the firefighting contributed to the disease. This defense has been found insufficient by some courts; for example, the Virginia Court of Appeals found that "testimony which merely refutes the premise of such a legislatively enacted presumption does not constitute proper evidence in rebuttal."[53] However, insurers and self-insured employers have been successful in rebutting a presumption in some instances, as was previously noted with respect to the Texas firefighter cancer presumption law. The following cases illustrate the varying standards that courts have established to overcome a presumption:

- *Industrial Claim Appeals Office v. Town of Castle Rock* (May 2016): In this Colorado case, the Colorado Supreme Court affirmed the appellate court, ruling that, "To meet its burden of proof, the employer is not required to prove a specific alternate cause of the firefighter's cancer. Rather, the employer need only establish, by a preponderance of the medical evidence, that the firefighter's employment did not cause the firefighter's particular cancer because the firefighter's particular risk factors rendered it more probable that the firefighter's cancer arose from a source outside the workplace".

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[51] " Testimony by the Pennsylvania State Association of Township Supervisors on Act 46 of 2011," http://laborindustry.pasenategop.com/wp-content/uploads/sites/25/2017/03/herr-032917.pdf (March 29, 2017).
[52] Presumptions enacted in Vermont were contained in S 194, effective January 1, 2007.
[53] *Bristol City Fire Department v. Maine* (Virginia Court of Appeals; March 13, 2001). Similar case law has been established in the previously noted, *In the Matter of the Compensation of Leonard C. Damian, II, Claimant* (Oregon WC Board; filed October 26, 2012).

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- *City of Tarpon Springs and Florida League of Cities v. Vaporis* (March 2007): In this Florida case, a claim for WC benefits by a firefighter who passed the physical examination upon entering service but later suffered a heart attack, was denied as the court concluded that the employer had overcome the statutory firefighter presumption and that the employer was not required to prove the disease was caused by a "specific or non-occupational hazard" to rebut the presumption.
- *Johnston v. Illinois Workers' Compensation Commission* (April 2017): The appellate court found that clear and convincing evidence was not standard of proof necessary for firefighter's employer to rebut the WC statutory presumption that coronary artery disease suffered by firefighter that caused him to suffer near-fatal heart attack while removing snow at station arose out of and in the course of employment; rather, the WC Act simply required employer to offer some evidence sufficient to support finding that something other than firefighter's occupation caused his condition.
- *Bass v. City of Richmond Police Department* (June 1999): In this Supreme Court of Virginia case, the court stated that the employer may overcome the statutory presumption of benefits by showing that, by a preponderance of the evidence, that both "1) the claimant's disease was not caused by his employment, and 2) there was a non-work-related cause of the disease."

These cases highlight how the burden of proof required from the employer to successfully rebut a presumption can vary among states. For example, in Colorado, showing that an occupational disease was probably caused by something other than firefighting is sufficient to rebut a claim,[54] whereas in Virginia, the burden of proof is much higher because the employer must show that a specific non-work-related factor caused the disease.[55] The level of proof required of the employer will impact the number of claims that are compensated due to a firefighter presumption; therefore, until case law is established, there is uncertainty as to the actual impact on WC due to the enactment of a presumption.

Retroactive Impact

When a firefighter presumption is established, claims may be filed that resulted from exposures prior to the implementation of the presumption, particularly due to the cumulative nature and long latency periods of many occupational diseases covered by firefighter presumptions. As such, original premiums for previous policy periods would not have contemplated the increased costs associated with the presumption when a firefighter presumption is subsequently established. Since premiums from prior policy periods cannot be adjusted, an unfunded liability for insurance carriers and self-insureds may be created.

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[54] At least as of 2016, when the decision was rendered; as previously noted, prior to *Castle Rock*, the lower courts tended to interpret the statute in practical terms as an irrebuttable presumption.

[55] One may have expected many firefighter cancer claims to appear in NCCI's database; however, this was not the case. This may be due to the extremely low percentage of firefighter exposure in the insured market, roughly 2% in Virginia versus 24% in combined NCCI states.

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Conclusion

The widespread introduction of statutory presumptions for firefighters and other first responders has created the need to understand the role that these presumptions play on the jurisdictions' WC systems in which they are proposed. Two factors affect the degree of accuracy when estimating the cost impact associated with enacting a firefighter presumption: the limited scope of the data reported to NCCI and the variation in results of published studies on the link between certain occupational diseases and firefighting. However, NCCI expects that the enactment of such presumptions will result in an increase in WC costs.

A review of the current enacted firefighter presumptions reveals that statutory language varies by jurisdiction. However, there are three key elements common to all firefighter presumptions that affect WC costs: the diseases that are covered, the restrictions that apply to the presumptions, and the ability of the employer to rebut the presumption. First, the types of diseases covered and the elements used to define those diseases play an important role in both the frequency and severity of newly compensable claims. Next, restrictions such as tenure, age requirements, health evaluations, and non-smoker clauses can also affect the ultimate cost. Finally, the wording of statutes regarding the rebuttal itself (e.g., simply "rebuttable" or "rebuttal by a preponderance of the evidence") will influence claim frequency.

Lastly, some additional considerations must be noted because they could influence the application and ultimate impact of a firefighter presumption:

- Whether or not the bill is applicable to volunteer firefighters and other non-first responder occupations could raise questions about the fairness of the bill or further complicate the cost impact analysis
- The judicial environment in which a newly established presumption is enacted will impact its overall cost to the WC system because the lack of established case law will leave a degree of interpretation to the courts
- With the enactment of the bill, there may also be the unexpected consequence of the availability of WC coverage for firefighters, resulting in a shift from the voluntary or self-insured market to the residual market, which could exert a strain on the entire WC system
- Moreover, the enactment of a firefighter presumption will most likely result in an unfunded liability if the presumption is applied retroactively

In conclusion, there are many factors that could affect the ultimate cost impact of a firefighter presumption on a state's WC system, and this document is intended to provide insights into the key issues associated with such a legislative change.

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FIRST RESPONDER PRESUMPTIONS FOR WORKERS COMPENSATION IN JURISDICTIONS IN WHICH NCCI IS A RATING OR ADVISORY ORGANIZATION (As of 11/1/2018)

State	Type of Injury, Disease, or Condition				
	Cancer (incl. leukemia)	Lung / Respiratory	Blood / Infectious	Heart / Vascular	Mental-Mental
Alabama					
Alaska	✓	✓		✓	
Arizona	✓	✓		✓	
Arkansas					
Colorado	✓		✓		
Connecticut				✓	
District of Columbia	✓	✓	✓	✓	
Florida		✓	✓	✓	
Georgia					
Hawaii					
Idaho	✓				
Illinois	✓	✓	✓	✓	
Indiana					
Iowa					
Kansas					
Kentucky					
Louisiana	✓	✓	✓	✓	
Maine	✓	✓	✓	✓	✓
Maryland	✓	✓		✓	
Mississippi					
Missouri					
Montana					
Nebraska					
Nevada	✓	✓	✓	✓	
New Hampshire	✓	✓		✓	
New Mexico	✓	✓	✓	✓	
North Carolina					
Oklahoma	✓	✓	✓	✓	
Oregon	✓	✓		✓	
Rhode Island					
South Carolina		✓		✓	
South Dakota					
Tennessee					
Texas	✓	✓	✓	✓	
Utah	✓		✓		
Vermont	✓	✓	✓	✓	✓

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Virginia					
West Virginia					

Firefighters (may include volunteer and/or non-volunteer)

Police or peace officers (may include sheriffs and other law enforcement employees)

Correctional officers

Emergency medical personnel, which includes Emergency Medical Technicians (EMTs) and paramedics, who generally are advanced providers of emergency medical care (may include related occupations)

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MINUTES

MONTANA HOUSE OF REPRESENTATIVES
66th LEGISLATURE - REGULAR SESSION

COMMITTEE ON BUSINESS AND LABOR

Call to Order: Chair Mark Noland, on March 15, 2019 at 8:30 AM, in Room 172 Capitol

ROLL CALL

Members Present:

Rep. Mark Noland, Chair (R)
Rep. Vince Ricci, Vice Chair (R)
Rep. Sharon Stewart Peregoy, Vice Chair (D)
Rep. Fred Anderson (R)
Rep. Willis Curdy (D)
Rep. Neil Duram (R)
Rep. Ross H. Fitzgerald (R)
Rep. Moffie Funk (D)
Rep. Steve Gunderson (R)
Rep. Derek J. Harvey (D)
Rep. Joel G. Krautter (R)
Rep. Denley M. Loge (R)
Rep. Christopher Pope (D)
Rep. Sue Vinton (R)

Members Excused:

Rep. Edward Buttrey (R)
Rep. Bruce Grubbs (R)
Rep. Andrea Olsen (D)
Rep. Gordon Pierson Jr (D)
Rep. Katie Sullivan (D)

Members Absent: None

Staff Present: Joanne Kauzlarich, Committee Secretary
Pat Murdo, Legislative Branch

Audio Committees: These minutes are in outline form only. They provide a list of participants and a record of official action taken by the committee. The link to the audio recording of the meeting is available on the Legislative Branch website.

Committee Business Summary:
Hearing & Date Posted: SB 126, 2/28/2019; SB 160, 2/28/2019; SB 171, 3/11/2019; SB 295, 2/28/2019

08:31:23 Chair Noland
08:33:07 Rep. Vinton

HEARING ON SB 160

Opening Statement by Sponsor:
08:34:27 Sen. Nate McConnell (D), SD 48, opened the hearing on SB 160, Provide workers' compensation for presumptive diseases of firefighters.

08:34:35 Vice Chair Ricci left the meeting.
08:36:47 Rep. Grubbs joined the meeting.
08:39:02 Rep. Olsen joined the meeting.
08:46:33 Rep. Buttrey joined the meeting.

Proponents' Testimony:
08:47:36 Dave Maslowski, Montana State Firemens Association (MSFA)
EXHIBIT(buh53a01)

08:52:09 Joel Gaertig, Montana State Firemens Association (MSFA)
EXHIBIT(buh53a02)

08:56:34 Rob Shoplock, Professional Fire Fighters of Idaho (PFFI)
09:01:44 David Van Son, Montana State Council of Professional Fire Fighters (MSCOPFF)
09:05:36 Rich Cowger, Montana State Fire Chief Association (MSFCA)
09:07:30 Allen Ekblad, American Federation of Labor and Congress of Industrial Organizations (AFL-CIO)
09:07:51 Rep. Schreiner, HD 26
09:10:39 Amanda Curtis, Montana Federation of Public Employees (MFPE)

Opponents' Testimony:
09:11:19 Brian Thompson, Montana Municipal Interlocal Authority (MMIA)
EXHIBIT(buh53a03)

09:16:49 Larry Jones, Montana Self-Insurers Association (MSIA)
09:18:34 Eric Bryson, Montana Association of Counties (MACo)
09:22:27 Cary Hegreberg, Montana Chamber of Commerce (MCC)

Informational Testimony:
09:27:57 Laura Williamson, Department of Public Health and Human Services (DPPHS)

Questions from Committee Members and Responses:
09:28:46 Rep. Gunderson
09:29:53 Cary Hegreberg, MCC
09:30:22 Brian Thompson, MMIA
09:30:41 Rep. Gunderson
09:30:43 Brian Thompson, MMIA
09:31:07 Rep. Gunderson
09:31:33 Joel Gaertig, MSFA

09:31:46 Rep. Vinton
09:32:21 Larry Jones, MSIA
09:33:52 Rep. Vinton
09:34:03 Larry Jones, MSIA
09:34:11 Rep. Funk
09:34:39 Rob Shoplock, PFFI
09:35:21 Rep. Grubbs
09:36:16 Brian Reed, Montana State Firemens Association (MSFS)
09:36:36 Rep. Grubbs
09:36:48 Brian Reed, MSFS
09:37:17 Rep. Olsen
09:37:43 Vice Chair Ricci rejoined the meeting.
09:38:45 Eric Bryson, MACo
09:40:51 Rep. Pope
09:41:50 Cary Hegreberg, MCC
09:42:06 Rep. Harvey
09:42:56 Rob Shoplock, PFFI
09:45:03 Rep. Harvey
09:45:15 Rob Shoplock, PFFI
09:45:21 Rep. Vinton
09:45:50 Laura Williamson, DPHHS
09:49:08 Rep. Gunderson
09:49:55 Sen. McConnell
09:50:43 Rep. Gunderson
09:51:07 Sen. McConnell
09:52:02 Rep. Gunderson
09:52:35 Sen. McConnell
09:53:39 Rep. Fitzgerald
09:54:10 Sen. McConnell
09:54:29 Rob Shoplock, PFFI
09:54:59 Rep. Fitzgerald
09:55:18 Rob Shoplock, PFFI
09:55:22 Rep. Fitzgerald
09:55:47 Rob Shoplock, PFFI
09:56:27 Rep. Grubbs
09:57:07 Sen. McConnell
09:57:54 Rep. Pierson joined the meeting.
09:59:39 Rep. Duram
10:00:07 Sen. McConnell
10:00:33 Rep. Duram
10:00:49 Sen. McConnell
10:01:18 Rep. Duram
10:01:46 Sen. McConnell
10:02:18 Rob Shoplock, PFFI
10:03:40 Rep. Duram
10:04:00 Chair Noland
10:05:16 Sen. McConnell
10:06:37 Chair Noland
10:07:20 Sen. McConnell
10:09:58 Chair Noland

10:10:14 Sen. McConnell
10:11:30 Chair Noland
10:11:45 Rob Shoplock, PFFI
10:11:55 Chair Noland
10:12:08 Rob Shoplock, PFFI
10:12:43 Chair Noland
10:13:01 Rob Shoplock, PFFI
10:13:22 Chair Noland
10:13:35 Rep. Duram
10:13:58 Sen. McConnell

Closing by Sponsor:
10:14:35 Sen. McConnell

HEARING ON SB 295

Opening Statement by Sponsor:
10:17:00 Sen. Tom Richmond (R), SD 28, opened the hearing on SB 295, Generally revise public employee death benefits.

Proponents' Testimony:
10:20:55 Keni Grose, Montana Department of Transportation (MDT)
10:23:00 Amanda Curtis, Montana Public Federation of Employees (MFPE)
10:23:47 Gretchen Rooney, Self

Opponents' Testimony: None

Informational Testimony:
10:25:22 Anjenette Schafer, Department of Administration (DOA)

Questions from Committee Members and Responses: None

Closing by Sponsor:
10:26:04 Sen. Richmond

HEARING ON SB 126

Opening Statement by Sponsor:
10:34:30 Sen. Fred Thomas (R), SD 44, opened the hearing on SB 126, Revise workers' comp solvency guidelines for self-insured public entities.

Proponents' Testimony:
10:40:55 Shannon Shanholtzer, Montana Association of Counties (MACo)
10:43:02 Eric Bryson, Montana Association of Counties (MACo)

Opponents' Testimony:
10:49:58 Bill Wheeler, Department of Labor and Industry (DLI)
11:03:33 Al Smith, Labor Management Advisory Council (LMAC)
11:05:17 Lance Zanto, Labor Management Advisory Council (LMAC)

Informational Testimony: None

Questions from Committee Members and Responses:
11:06:24 Vice Chair Ricci
11:06:40 Eric Bryson, MACo
11:07:00 Vice Chair Ricci
11:07:05 Eric Bryson, MACo
11:07:46 Vice Chair Ricci
11:07:50 Eric Bryson, MACo
11:08:24 Rep. Harvey
11:08:47 Eric Bryson, MACo
EXHIBIT(buh53a04)

11:10:37 Rep. Pope
11:11:12 Eric Bryson, MACo
11:11:27 Rep. Pope
11:11:33 Eric Bryson, MACo
11:12:08 Rep. Pope
11:12:36 Eric Bryson, MACo
11:14:14 Rep. Pope
11:14:39 Eric Bryson, MACo
11:15:18 Rep. Pope
11:15:26 Eric Bryson, MACo
11:15:36 Rep. Duram
11:16:22 Eric Bryson, MACo
11:16:43 Rep. Duram
11:17:00 Eric Bryson, MACo
11:17:19 Shannon Shanholtzer, MACo
11:17:59 Vice Chair Ricci
11:18:12 Sen. Thomas
11:19:03 Rep. Curdy
11:19:46 Bill Wheeler, DLI
11:19:58 Rep. Curdy
11:20:02 Bill Wheeler, DLI
11:20:10 Rep. Curdy
11:20:14 Bill Wheeler, DLI
11:20:23 Rep. Curdy
11:20:36 Bill Wheeler, DLI
11:20:57 Rep. Harvey
11:21:36 Bill Wheeler, DLI

Closing by Sponsor:
11:23:05 Sen. Thomas

HEARING ON SB 171

Opening Statement by Sponsor:
11:26:39 Sen. Steve Fitzpatrick (R), SD 10, opened the hearing on SB 171, Generally revise laws related to firefighters.

Proponents' Testimony:
11:31:48 Joel Gaertig, Montana State Firemens Association (MSFA)

Opponents' Testimony: None

Informational Testimony: None

Questions from Committee Members and Responses:
11:33:06 Rep. Gunderson
11:33:41 Sen. Fitzpatrick
11:34:40 Rep, Gunderson
11:35:04 Rep. Curdy
11:36:03 Joel Gaertig, MSFA
11:36:57 Rep. Curdy
11:37:06 Sen. Fitzpatrick
11:37:58 Rep. Olsen
11:38:25 Sen. Fitzpatrick
11:39:12 Rep. Olsen
11:40:23 Sen. Fitzpatrick
11:40:55 Rep. Olsen
11:41:53 Sen. Fitzpatrick
11:42:40 Rep. Olsen
11:43:02 Sen. Fitzpatrick
11:43:12 Rep. Olsen
11:43:23 Sen. Fitzpatrick
11:43:29 Rep. Duram
11:43:50 Sen. Fitzpatrick
11:44:16 Rep. Duram
11:44:32 Sen. Fitzpatrick

Closing by Sponsor:
11:44:56 Sen. Fitzpatrick

Committee Business:
11:45:16 Chair Noland

ADJOURNMENT

Adjournment: 11:46:20

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Joanne Kauzlarich, Secretary

jk

Additional Documents:

EXHIBIT(buh53aad.pdf)

Protect Those Who Protect Us

☑ PASS SB160 the Montana Firefighter Heath and Safety Bill

EXHIBIT 1
DATE 3.15.2017
HB SB 160

Facts About Fire Fighter Occupational Cancer:

Fire fighters are more likely to contract certain cancers than the general population:

- Testicular (2.02 times greater)
- Non-Hodgkin (1.51)
- Prostate Cancer (1.28)
- Brain Cancer (1.31)
- Leukemia (1.14)
- Multiple Myeloma (1.53)
- Skin Cancer (1.39)
- Malignant Melanoma (1.31)
- Colon Cancer (1.21)

Fire fighters are on the frontlines fighting fires and saving lives and, as a result, we're exposed to a toxic soup of chemicals and combustion byproducts linked to occupational cancer.

A study by National Institute for Occupational Safety and Health (NIOSH) in October 2013 found that **fire fighters have a 14 percent increased risk of dying from cancer compared to the general population**.

Fire fighters are not just exposed to toxins through inhalation. Some contaminants are also absorbed through the skin and contribute to a fire fighter's overall exposure.

[SB160] Facts About the Montana Firefighter Health and Safety Bill:

- The Montana Firefighter Health and Safety Bill covers job-related illnesses for both volunteer and career fire fighters, including heart/lung disease, post-traumatic stress disorder (PTSD) and certain occupational cancers.
- The bill requires fire fighters to have physicals at regular intervals and excludes regular tobacco users.
- Occupational cancers covered by this bill include colorectal cancers, esophageal cancers, kidney cancers, leukemia, mesothelioma, multiple myeloma and non-hodgkin lymphoma.
- Montana voters agree that it is important for job-related illnesses to be covered for heart disease (81% support), respiratory disease (80% support), cancer (76% support), PTSD (70% support) and infectious disease (68% support).
- 65 percent of Montana voters would support a law to cover fire fighters for job-related illnesses.

Montana Fire Fighters

Senate Bill 160

Fire Fighter Protection Act

Fire Fighter Class Codes for Workers' Compensation

Idaho WC Rates for Firefighters

2016	4.87%	**** Presumptive Law Passed****
2019	4.12%	**- 0.75% Firefighter Class Code**
		-4.2% Overall

Wyoming WC Rates for Firefighters

2017	5.98%	****Presumptive Law Passed****
2019	6.66%	**+ 0.68% Firefighter Class Code**

North Dakota WC Rates for Firefighters

2013	6.84%	**** Presumptive Law Passed ****
2018	4.90%	**- 1.94% Firefighter Class Code**

New Mexico WC Rates for Firefighters

2009	10.82%	**** Presumptive Law Passed ****
2019	6.63%	**- 4.19% Firefighter Class Code**

Montana Fire Fighters

SENATE BILL 160

Fire Fighter Protection Act

Firefighter WC Trends

Idaho WC rates for Firefighters

2016	4.87%	***Presumptive Law Passed***
2017	4.86%	
2018	4.28%	
2019	4.12%	

Wyoming WC rates for Firefighters

2013	6.16%	
2014	6.06%	
2015	6.16%	
2016	5.76%	
2017	5.98%	***Presumptive Law Passed***
2018	6.87%	
2019	6.66%	

North Dakota WC rates for Firefighters

2013	6.84%	*** Presumptive Law Passed ***
2014	6.43%	
2015	6.26%	
2016	5.08%	
2017	4.69%	
2018	4.90%	

New Mexico WC rates for Firefighters

2008	15.24%	
2009	10.82%	***Presumptive Law Passed***
2010	9.09%	
2011	9.09%	
2012	8.24%	
2013	8.00%	
2014	7.93%	
2015	7.41%	
2016	6.84%	
2017	6.56%	
2018	6.20%	
2019	6.63%	

ANALYSIS OF MONTANA SENATE BILL 160
As Drafted on January 22, 2019

Senate Bill (SB) 160, if enacted in its current form, may result in an indeterminate increase in workers compensation (WC) system costs for the firefighter classification code in Montana. Much of the cost impact for the firefighter class code would be borne by governmental entities who are the typical employers of the affected employees. However, the impact on statewide insured workers compensation (WC) costs is expected to be minimal[1] since data reported to NCCI indicates that the firefighter classification represents less than 1% of losses[2] in Montana.

If enacted, the ultimate cost impact would be realized through future loss experience and reflected in subsequent NCCI loss cost filings in the state.

Since SB 160 would apply to presumptive occupational diseases diagnosed on or after July 1, 2019, which could have resulted from exposure prior to that date, this bill could also have a retroactive impact since premiums calculated and collected for policies prior to the effective date of the bill would not have contemplated this broadening of the compensability standard.

Summary of SB 160

SB 160 proposes to create presumptive coverage for certain diseases associated with firefighting activities and would expand the coverage to volunteer firefighters. (An employer of a volunteer firefighter may elect to additionally obtain the presumptive occupational disease coverage as part of providing coverage under the WC Act, subject to the insurer agreeing to provide presumptive coverage.) The "presumptive occupational diseases" include several types of cancer, cardiovascular disease, pulmonary or respiratory disease, and post-traumatic stress disorder (PTSD). These diseases would be presumed to be proximately caused by firefighting activities provided the following:

- The evidence of the disease becomes apparent after the number of years of the firefighter's employment as listed for each occupational disease in Section 1(2)(a) through (l), or
- Within 10 years of the last date on which the firefighter was engaged in firefighting activities for an employer

Section 5(3)(c) states that "objective medical findings are sufficient for a presumptive occupational disease as defined in [the bill] but may be overcome by substantial evidence, as defined in [the bill]".

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[1] Minimal in this context is defined as an impact on overall system costs of less than 0.2%.

[2] Source: NCCI Workers Compensation Statistical Plan data for Montana. This figure of less than 1% may understate the total population share of Montana firefighters, since the organizations employing them are often self-insured and therefore are not required to report data to NCCI.

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An insurer that disputes a presumptive occupational disease claim has the burden of proof in establishing by substantial evidence that the firefighter is not suffering from such a disease.

Currently, under MCA 39-71-105, stress claims (also referred to as "mental-mental claims" or "mental-physical claims") are not compensable under Montana's WC and occupational disease laws. SB 160 would include PTSD amongst the list of presumptive occupational diseases in Section 1(2)(k) and would also amend MCA 39-71-105 to clarify that stress claims are not compensable except as provided for firefighters' presumptive occupational disease claims. Therefore, PTSD claims would be compensable for firefighters, if SB 160 is enacted. SB 160 defines PTSD consistent with the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, and states that the disorder must be related to experiences encountered during firefighting activities in order to be compensable.

If enacted, SB 160 would be effective July 1, 2019 and would apply to presumptive occupational diseases diagnosed on or after July 1, 2019.

Actuarial Analysis

Under SB 160, firefighters diagnosed with the aforementioned diseases (each with an associated number of years of employment) would be presumed compensable for occupational disease benefits under the WC Act. SB 160 would be expected to increase the number of compensable WC claims in Montana.

PTSD suffered by firefighters would also be compensable under the conditions specified, which would be expected to further increase the number of WC claims. The incidence of PTSD and other stress-related conditions is estimated to be significantly higher for firefighters compared to the general population. According to the U.S. Department of Veterans Affairs, about 55% of the general population will experience at least one trauma in their lives and, as a result, about 7% to 8% of the population will have PTSD at some point in their lives.[3] In comparison, various sources have reported the prevalence of PTSD among firefighters to be in the range of 7% to 37%.[4]

NCCI is unable to quantify the expected increase in the number of claims and average cost of the claims that would be entitled to indemnity and medical benefits if SB 160 were enacted. However, **due to the inclusion of a presumption for certain diseases and PTSD coverage for firefighters, NCCI estimates that WC claims could increase significantly for the occupational**

[3] U.S. Department of Veterans Affairs. (No date). How Common is PTSD? Retrieved from https://www.ptsd.va.gov/understand/common/common_adults.asp .
[4] Tull, Matthew. (2013, January 29). Rates of PTSD in Firefighters. Retrieved from http://ptsd.about.com/od/prevalence/a/Firefighters.htm.

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classification if this proposal were enacted. Given the limited share of costs that this classification comprises, NCCI anticipates the impact of such an enactment on insured WC system costs in Montana to be minimal.

Other Considerations

NCCI's analysis of this bill is prospective only (i.e., for injuries occurring on or after the effective date). Since SB 160 would apply to presumptive occupational diseases diagnosed on or after July 1, 2019, the proposed changes could potentially extend to injuries occurring prior to the date the bill becomes law, resulting in possible retroactive cost impacts. Such a retroactive application could result in an unfunded liability to the extent that these additional costs were not contemplated in the premiums charged for policies written prior to the effective date of the bill.

THIS DOCUMENT AND ANY ANALYSES, ASSUMPTIONS, AND PROJECTIONS CONTAINED HEREIN PROVIDE AN ESTIMATE OF THE POTENTIAL PROSPECTIVE SYSTEM COST IMPACT(S) OF PROPOSED BENEFIT CHANGE(S) AND IS PROVIDED SOLELY AS A REFERENCE TOOL TO BE USED FOR INFORMATIONAL PURPOSES ONLY. THIS DOCUMENT SHALL NOT BE CONSTRUED OR INTERPRETED AS PERTAINING TO THE NECESSITY FOR OR A REQUEST FOR A LOSS COST INCREASE OR DECREASE, THE DETERMINATION OF LOSS COSTS, OR LOSS COSTS TO BE REQUESTED. THE ANALYSIS CONTAINED HEREIN EVALUATES THE DESCRIBED CHANGES IN ISOLATION UNLESS OTHERWISE INDICATED; ANY OTHER CHANGES NOT INCLUDED IN THIS ANALYSIS THAT ARE ULTIMATELY ENACTED MAY RESULT IN A DIFFERENT ESTIMATED IMPACT. I, BRUCE SPIDELL, FCAS, MAAA, AM AN ASSISTANT ACTUARY FOR THE NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC. AND THE ACTUARY RESPONSIBLE FOR THE PREPARATION OF THIS DOCUMENT. THIS DOCUMENT IS PROVIDED "AS IS" ON THE DATE SET FORTH HEREIN AND INCLUDES INFORMATION AND EVENTS AVAILABLE AT THE TIME OF PUBLICATION ONLY. NCCI'S FINAL ESTIMATED IMPACT MAY DIFFER FROM WHAT IS PROVIDED IN THIS ANALYSIS IF ADDITIONAL INFORMATION BECOMES AVAILABLE OR IF DATA NECESSARY TO ANALYZE PROVISIONS THAT WERE NOT EXPLICITLY QUANTIFIED PREVIOUSLY BECOMES AVAILABLE.

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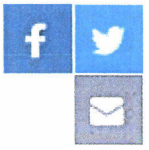
DEAN L. CAMERON
Director

Idaho Department of Insurance News Release
For immediate release: October 2, 2018
Contact: Steve Lombard, 208-334-4312
steve.lombard@doi.idaho.gov



Workers' Compensation Rates to Decrease in Idaho for 2019

BOISE, ID – A proposal for a minus (-) 4.2 percent overall rate change to Idaho workers' compensation insurance, effective January 1, 2019, has been approved by the Idaho Department of Insurance. The proposed rate change comes from the National Council on Compensation Insurance (NCIC).

"We are pleased to announce this reduction, a move which will benefit Idaho businesses, their employees and the economy in general," said Director Dean Cameron. "The change in the 2019 workers' compensation rates reflects an improvement in our state rating factors, including a slight decline in both the frequency of claims for lost work time, and the average cost of those claims."

The state's workers' compensation benefit system is designed to cover medical costs associated with workplace injuries. It also provides wage replacement benefits to injured workers for lost work time. NCCI annually collects information about Idaho's workers' compensation system and submits proposed rates to the Department of Insurance for review and approval.

About the Department of Insurance
The Idaho Department of Insurance has been regulating the business of insurance in Idaho since 1901. The mission of the Department is to serve and protect Idahoans by equitably, effectively and efficiently administering the Idaho Insurance Code and the International Fire Code. For more information, visit doi.idaho.gov.

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IDAHO WORKER'S COMPENSATION RATES PER $100 OF PAYROLL EFFECTIVE JANUARY 1, 2016
Rates in DEV. RATE columns are to be used for the June 30, 2016 and Dec. 31, 2016 IC-4010A PREMIUM TAX REPORTS

CLASS CODE	NCCI RATE	DEV. RATE	CLASS CODE	NCCI RATE	DEV. RATE	CLASS CODE	NCCI RATE	DEV. RATE	CLASS CODE	NCCI RATE	DEV. RATE	CLASS CODE	NCCI RATE	DEV. RATE
7099M	13.63	**12.403**	7402	0.25	**0.228**	8001	4.15	**3.777**	8116	3.42	**3.112**	8601	0.50	**0.455**
7133	4.42	**4.022**	7403	3.34	**3.039**	8002	3.36	**3.058**	8203	10.74	**9.773**	8602	1.20	**1.092**
7151M	5.37	**4.887**	7405N	1.47	**1.338**	8006	3.06	**2.785**	8204	4.92	**4.477**	8603	0.15	**0.137**
7152M	6.79	**6.179**	7420	6.18	**5.624**	8008	2.12	**1.929**	8209X	6.93	**6.306**	8606	7.78	**7.080**
7153M	5.97	**5.433**	7421	1.06	**0.965**	8010	2.84	**2.584**	8215	4.26	**3.877**	8709F	6.96	**6.334**
7219X	9.22	**8.390**	7422	1.97	**1.793**	8013	0.55	**0.501**	8227	3.99	**3.631**	8719	4.50	**4.095**
7222	7.56	**6.880**	7425	3.03	**2.757**	8015	1.17	**1.065**	8232X	6.26	**5.697**	8720	1.51	**1.374**
7230	7.31	**6.652**	7431N	1.09	**0.992**	8017X	2.21	**2.011**	8233	3.96	**3.604**	8721	0.46	**0.419**
7231	7.15	**6.507**	7445N	0.79	**0.719**	8018	3.65	**3.322**	8235	8.37	**7.617**	8723	0.30	**0.273**
7232	7.50	**6.825**	7453N	0.59	**0.537**	8021	6.51	**5.924**	8263	10.10	**9.191**	8725	3.32	**3.021**
7309F	20.63	**18.773**	7502	2.34	**2.129**	8031	4.42	**4.022**	8264	6.56	**5.970**	8726F	4.14	**3.767**
7313F	4.58	**4.168**	7515	1.15	**1.047**	8032	3.56	**3.240**	8265	8.08	**7.353**	8734M	0.70	**0.637**
7317F	12.59	**11.457**	7520	3.99	**3.631**	8033	3.35	**3.049**	8277*	36.79	**33.479**	8737M	0.63	**0.573**
7327FX	25.39	**23.105**	7538	7.52	**6.843**	8037	2.79	**2.539**	8279*	9.80	**8.918**	8738M	0.80	**0.728**
7333M	3.92	**3.567**	7539	2.13	**1.938**	8039	2.67	**2.430**	8288X	9.64	**8.772**	8742	0.52	**0.473**
7335M	4.35	**3.959**	7540	4.31	**3.922**	8044	3.36	**3.058**	8291	5.75	**5.233**	8745	6.07	**5.524**
7337M	4.95	**4.505**	7580	3.85	**3.504**	8046	4.21	**3.831**	8292X	5.74	**5.223**	8748	1.01	**0.919**
7350FX	14.36	**13.068**	7590	3.45	**3.140**	8047	1.42	**1.292**	8293	16.27	**14.806**	8755	0.98	**0.892**
7360X	7.12	**6.479**	7600	4.04	**3.676**	8058	3.97	**3.613**	8304	6.10	**5.551**	8799	0.91	**0.828**
7370	9.09	**8.272**	7605	3.07	**2.794**	8072	1.38	**1.256**	8350	6.51	**5.924**	8800	2.35	**2.139**
7380	4.97	**4.523**	7610	0.74	**0.673**	8102	2.99	**2.721**	8380	3.72	**3.385**	8803	0.11	**0.100**
7382	8.16	**7.426**	7705	8.71	**7.926**	8103	4.35	**3.959**	8381	3.68	**3.349**	8805M	0.41	**0.373**
7390	7.76	**7.062**	7710	4.87	**4.432**	8105	3.71	**3.376**	8385	6.40	**5.824**	8810	0.30	**0.273**
7394M	4.38	**3.986**	7711	4.87	**4.432**	8106	6.40	**5.824**	8392	3.24	**2.948**	8811X	0.25	**0.228**
7395M	4.87	**4.432**	7720	4.02	**3.658**	8107	4.50	**4.095**	8393	2.41	**2.193**	8814M	0.36	**0.328**
7398M	5.54	**5.041**	7855	5.20	**4.732**	8111	3.42	**3.112**	8500	8.25	**7.508**	8815M	0.46	**0.419**

*Refer to the Footnotes Page for additional information on this class code.

IDAHO WORKER'S COMPENSATION RATES PER $100 OF PAYROLL EFFECTIVE JANUARY 1, 2016
Rates in DEV. RATE columns are to be used for the June 30, 2016 and Dec. 31, 2016 IC-4010A PREMIUM TAX REPORTS

CLASS CODE	NCCI RATE	DEV. RATE	CLASS CODE	NCCI RATE	DEV. RATE	CLASS CODE	NCCI RATE	DEV. RATE	CLASS CODE	NCCI RATE	DEV. RATE	CLASS CODE	NCCI RATE	DEV. RATE
4439	3.29	**2.994**	4751	3.50	**3.185**	5221	7.64	**6.952**	5703	17.64	**16.052**	6503	2.82	**2.566**
4452	3.66	**3.331**	4766NX	7.31	**6.652**	5222	10.64	**9.682**	5705	19.50	**17.745**	6504	4.43	**4.031**
4459	3.61	**3.285**	4771NX	4.41	**4.013**	5223	6.86	**6.243**	5951	0.62	**0.564**	6702M*	6.32	**5.751**
4470	3.38	**3.076**	4777	5.34	**4.859**	5348	6.81	**6.197**	6003	8.44	**7.680**	6703M*	7.99	**7.271**
4484	3.97	**3.613**	4825	2.39	**2.175**	5402	6.50	**5.915**	6005	5.76	**5.242**	6704M*	7.02	**6.388**
4493	3.76	**3.422**	4828	4.21	**3.831**	5403	12.52	**11.393**	6017	6.89	**6.270**	6801F	6.81	**6.197**
4511	1.30	**1.183**	4829	1.30	**1.183**	5437	7.32	**6.661**	6018	3.54	**3.221**	6811	7.67	**6.980**
4557	3.16	**2.876**	4902	3.63	**3.303**	5443	5.01	**4.559**	6045	5.00	**4.550**	6824F	11.26	**10.247**
4558	2.44	**2.220**	4923	1.43	**1.301**	5445	9.48	**8.627**	6204	16.86	**15.343**	6826F	7.91	**7.198**
4568	3.53	**3.212**	5020	7.21	**6.561**	5462	8.93	**8.126**	6206	4.39	**3.995**	6834	5.01	**4.559**
4581	1.19	**1.083**	5022	12.42	**11.302**	5472	6.42	**5.842**	6213	2.82	**2.566**	6836	5.34	**4.859**
4583	4.30	**3.913**	5037	24.23	**22.049**	5473	12.89	**11.730**	6214	4.03	**3.667**	6843F	11.53	**10.492**
4611	1.56	**1.420**	5040	12.95	**11.785**	5474	8.80	**8.008**	6216	7.39	**6.725**	6845F	9.67	**8.800**
4635	3.95	**3.595**	5057	8.43	**7.671**	5478	7.46	**6.789**	6217X	6.38	**5.806**	6854	3.90	**3.549**
4653	3.06	**2.785**	5059	22.46	**20.439**	5479	9.79	**8.909**	6229	7.63	**6.943**	6872F	12.15	**11.057**
4665	10.89	**9.910**	5069	23.34	**21.239**	5480	6.66	**6.061**	6233	3.40	**3.094**	6874F	19.72	**17.945**
4670	13.47	**12.258**	5102	11.28	**10.265**	5491	2.60	**2.366**	6235	8.11	**7.380**	6882	5.34	**4.859**
4683	5.37	**4.887**	5146	12.83	**11.675**	5506	7.03	**6.397**	6236	14.05	**12.786**	6884	9.93	**9.036**
4686	3.30	**3.003**	5160	2.96	**2.694**	5507	5.58	**5.078**	6237	2.27	**2.066**	7016M	4.36	**3.968**
4692	0.65	**0.592**	5183	5.78	**5.260**	5508D	12.26	**11.157**	6251D	6.74	**6.133**	7024M	4.84	**4.404**
4693	1.04	**0.946**	5188	4.86	**4.423**	5535	10.03	**9.127**	6252D	4.76	**4.332**	7038M	5.64	**5.132**
4703	2.88	**2.621**	5190	4.37	**3.977**	5537	6.69	**6.088**	6260D	10.36	**9.428**	7046M	10.78	**9.810**
4717	3.43	**3.121**	5191	1.18	**1.074**	5551	25.94	**23.605**	6306	5.91	**5.378**	7047M	5.51	**5.014**
4720	2.95	**2.685**	5192	3.38	**3.076**	5606	1.72	**1.565**	6319	4.29	**3.904**	7050M	7.14	**6.497**
4740	2.12	**1.929**	5213	9.37	**8.527**	5610	8.55	**7.781**	6325	5.67	**5.160**	7090M	6.27	**5.706**
4741	2.82	**2.566**	5215	7.86	**7.153**	5645	17.06	**15.525**	6400	8.54	**7.771**	7098M	11.98	**10.902**

*Refer to the Footnotes Page for additional information on this class code.

IDAHO WORKER'S COMPENSATION RATES PER $100 OF PAYROLL EFFECTIVE JANUARY 1, 2019

Rates in DEV. RATE columns are to be used for the June 30, 2019 and Dec. 31, 2019 IC-4010A PREMIUM TAX REPORTS

CLASS CODE		NCCI RATE	DEV. RATE	CLASS CODE		NCCI RATE	DEV. RATE	CLASS CODE		NCCI RATE	DEV. RATE	CLASS CODE		NCCI RATE	DEV. RATE	CLASS CODE		NCCI RATE	DEV. RATE
0005	X	5.10	**4.590**	0917		7.27	**6.543**	2021		3.66	**3.294**	2361		2.76	**2.484**	2735		5.53	**4.977**
0008		4.47	**4.023**	1005		5.68	**5.112**	2039		3.26	**2.934**	2362		2.32	**2.088**	2759		8.56	**7.704**
0016		11.22	**10.098**	1164	D	3.98	**3.582**	2041		4.22	**3.798**	2380		3.06	**2.754**	2790		1.96	**1.764**
0034		4.18	**3.762**	1165	D	3.45	**3.105**	2065		2.51	**2.259**	2388		1.72	**1.548**	2797		7.57	**6.813**
0035		3.80	**3.420**	1320		1.74	**1.566**	2070		4.33	**3.897**	2402		3.43	**3.087**	2799		9.00	**8.100**
0036		5.25	**4.725**	1322		9.50	**8.550**	2081		6.54	**5.886**	2413		2.93	**2.637**	2802		7.35	**6.615**
0037	X	5.93	**5.337**	1430		6.44	**5.796**	2089		5.96	**5.364**	2416		2.59	**2.331**	2835		3.62	**3.258**
0042		7.17	**6.453**	1438		5.53	**4.977**	2095		6.02	**5.418**	2417		1.72	**1.548**	2836		3.29	**2.961**
0050		8.42	**7.578**	1452		3.42	**3.078**	2105		5.38	**4.842**	2501		2.85	**2.565**	2841		5.02	**4.518**
0059	D	0.40	**0.360**	1463		12.74	**11.466**	2110		2.87	**2.583**	2503		1.93	**1.737**	2881		3.53	**3.177**
0065	D	0.09	**0.081**	1472		3.92	**3.528**	2111		3.42	**3.078**	2570		5.69	**5.121**	2883		5.74	**5.166**
0066	D	0.09	**0.081**	1624	D	4.02	**3.618**	2112		4.86	**4.374**	2585		5.56	**5.004**	2915		3.75	**3.375**
0067	D	0.09	**0.081**	1642		2.54	**2.286**	2114		4.28	**3.852**	2586		3.29	**2.961**	2916		5.42	**4.878**
0079		6.96	**6.264**	1654		6.17	**5.553**	2121		2.51	**2.259**	2587		2.63	**2.367**	2923		3.14	**2.826**
0083	X	12.22	**10.998**	1699		4.33	**3.897**	2130		4.66	**4.194**	2589		2.88	**2.592**	2960		7.41	**6.669**
0106		10.80	**9.720**	1701		6.77	**6.093**	2131		2.74	**2.466**	2600		5.33	**4.797**	3004		2.26	**2.034**
0113		5.41	**4.869**	1710	D	4.64	**4.176**	2143		3.45	**3.105**	2623		9.30	**8.370**	3018		3.95	**3.555**
0124	X	6.70	**6.030**	1747		3.01	**2.709**	2157		4.92	**4.428**	2651		2.15	**1.935**	3022		4.59	**4.131**
0170		3.14	**2.826**	1748		6.83	**6.147**	2172		2.13	**1.917**	2660		2.63	**2.367**	3027		3.75	**3.375**
0251		5.17	**4.653**	1803	D	10.68	**9.612**	2174		3.68	**3.312**	2670		4.45	**4.005**	3028		4.03	**3.627**
0401		14.75	**13.275**	1924		2.93	**2.637**	2211		9.91	**8.919**	2683		4.56	**4.104**	3030		7.27	**6.543**
0766	N	0.94	**0.846**	1925		4.26	**3.834**	2220		2.34	**2.106**	2688		3.51	**3.159**	3040		6.85	**6.165**
0771	N	0.63	**0.567**	2002		3.81	**3.429**	2286		2.26	**2.034**	2702	X	18.48	**16.632**	3041		6.24	**5.616**
0908	P	183.00	**164.700**	2003		4.81	**4.329**	2288		4.98	**4.482**	2710		10.47	**9.423**	3042		5.30	**4.770**
0913	P	610.00	**549.000**	2014		6.90	**6.210**	2302		2.30	**2.070**	2714		5.24	**4.716**	3064	X	5.31	**4.779**
0914	XP	64.00	**57.600**	2016		3.12	**2.808**	2305		3.37	**3.033**	2731		6.16	**5.544**	3076		4.40	**3.960**
3081	D	6.05	**5.445**	3270		3.37	**3.033**	3642		1.82	**1.638**	4038		4.30	**3.870**	4351		0.94	**0.846**
3082	D	5.63	**5.067**	3300		5.61	**5.049**	3643		2.79	**2.511**	4062		2.85	**2.565**	4352		2.18	**1.962**
3085	D	5.54	**4.986**	3303		3.10	**2.790**	3647		2.96	**2.664**	4101		3.46	**3.114**	4360		1.25	**1.125**
3110		5.58	**5.022**	3307		5.02	**4.518**	3648		1.96	**1.764**	4109		0.49	**0.441**	4361		1.54	**1.386**
3111		5.80	**5.220**	3315		4.75	**4.275**	3681		0.72	**0.648**	4110		0.97	**0.873**	4410		4.67	**4.203**
3113		2.26	**2.034**	3334		3.03	**2.727**	3685		1.18	**1.062**	4111		1.82	**1.638**	4420		4.73	**4.257**
3114		3.46	**3.114**	3336		3.62	**3.258**	3719		1.42	**1.278**	4114		4.17	**3.753**	4431		2.01	**1.809**
3118		2.35	**2.115**	3365		5.52	**4.968**	3724		4.45	**4.005**	4130		6.58	**5.922**	4432		1.76	**1.584**
3119		1.22	**1.098**	3372		4.14	**3.726**	3726		3.70	**3.330**	4131		6.08	**5.472**	4452		3.15	**2.835**
3122		2.98	**2.682**	3373		5.31	**4.779**	3803		2.60	**2.340**	4133		2.71	**2.439**	4459		3.61	**3.249**
3126		2.30	**2.070**	3383		3.21	**2.889**	3807		2.87	**2.583**	4149		0.86	**0.774**	4470		2.87	**2.583**
3131		2.45	**2.205**	3385		1.21	**1.089**	3808		4.19	**3.771**	4206		3.09	**2.781**	4484		3.03	**2.727**
3132		3.87	**3.483**	3400		4.55	**4.095**	3821		9.05	**8.145**	4207		2.24	**2.016**	4493		3.20	**2.880**
3145		2.63	**2.367**	3507		3.89	**3.501**	3822		4.61	**4.149**	4239		2.46	**2.214**	4511		1.11	**0.999**
3146		2.59	**2.331**	3515		2.71	**2.439**	3824		5.94	**5.346**	4240		4.25	**3.825**	4557		3.10	**2.790**
3169		3.12	**2.808**	3548		1.50	**1.350**	3826		1.38	**1.242**	4243		3.10	**2.790**	4558		2.35	**2.115**
3179		2.41	**2.169**	3559		3.32	**2.988**	3827		2.76	**2.484**	4244		2.60	**2.340**	4568		2.84	**2.556**
3180		3.09	**2.781**	3574		2.49	**2.241**	3830		1.76	**1.584**	4250		2.30	**2.070**	4581		0.99	**0.891**
3188		2.87	**2.583**	3581		1.38	**1.242**	3851		3.09	**2.781**	4251		3.43	**3.087**	4583		4.28	**3.852**
3220		2.29	**2.061**	3612		3.42	**3.078**	3865		2.05	**1.845**	4263		4.86	**4.374**	4611		1.40	**1.260**
3224		4.11	**3.699**	3620		6.43	**5.787**	3881		4.70	**4.230**	4273		2.62	**2.358**	4635		4.50	**4.050**
3227		3.89	**3.501**	3629		2.54	**2.286**	4000		6.25	**5.625**	4279		2.73	**2.457**	4653		2.07	**1.863**
3240		3.45	**3.105**	3632		4.04	**3.636**	4021		5.63	**5.067**	4283		2.23	**2.007**	4665		8.93	**8.037**
3241		3.37	**3.033**	3634		2.01	**1.809**	4024	D	3.85	**3.465**	4299		2.45	**2.205**	4670		10.24	**9.216**
3255		3.07	**2.763**	3635		4.12	**3.708**	4034		8.86	**7.974**	4304		5.58	**5.022**	4683		4.58	**4.122**
3257		3.51	**3.159**	3638		2.08	**1.872**	4036		3.39	**3.051**	4307		2.34	**2.106**	4686		2.99	**2.691**
4692		0.75	**0.675**	5188		5.96	**5.364**	5535		8.35	**7.515**	6306		5.97	**5.373**	7047	M	3.85	**3.465**
4693		1.10	**0.990**	5190		3.94	**3.546**	5537		5.81	**5.229**	6319		4.32	**3.888**	7050	M	7.40	**6.660**
4703		2.32	**2.088**	5191		1.07	**0.963**	5551		18.89	**17.001**	6325		4.81	**4.329**	7090	M	6.70	**6.030**
4717		2.76	**2.484**	5192		3.14	**2.826**	5606		1.31	**1.179**	6400		7.89	**7.101**	7098	M	10.41	**9.369**
4720		3.04	**2.736**	5213		7.85	**7.065**	5610		7.06	**6.354**	6503		2.48	**2.232**	7099	M	11.49	**10.341**
4740		1.30	**1.170**	5215		8.02	**7.218**	5645		15.59	**14.031**	6504		3.62	**3.258**	7133		2.80	**2.520**
4741		3.92	**3.528**	5221		6.25	**5.625**	5703		23.88	**21.492**	6702	M*	5.25	**4.725**	7151	M	3.40	**3.060**
4751		2.30	**2.070**	5222		8.92	**8.028**	5705		21.68	**19.512**	6703	M*	6.44	**5.796**	7152	M	4.17	**3.753**
4766	NX	6.87	**6.183**	5223		8.58	**7.722**	5951		0.47	**0.423**	6704	M*	5.83	**5.247**	7153	M	3.78	**3.402**

4771	NX	3.57	**3.213**	5348		6.05	**5.445**	6003		6.74	**6.066**	6801	F	10.85	**9.765**	7219		7.59	**6.831**
4777		4.26	**3.834**	5402		5.55	**4.995**	6005		5.25	**4.725**	6811		5.61	**5.049**	7222		6.86	**6.174**
4825		1.32	**1.188**	5403		9.42	**8.478**	6018		2.73	**2.457**	6824	F	12.53	**11.277**	7225		7.57	**6.813**
4828		3.12	**2.808**	5437		6.95	**6.255**	6045		5.13	**4.617**	6826	F	7.44	**6.696**	7230		7.22	**6.498**
4829		1.43	**1.287**	5443		4.00	**3.600**	6204		11.03	**9.927**	6834		4.28	**3.852**	7231		7.72	**6.948**
4902		3.21	**2.889**	5445		8.61	**7.749**	6206		3.13	**2.817**	6836		4.46	**4.014**	7232		8.80	**7.920**
4923		1.08	**0.972**	5462		8.57	**7.713**	6213		1.96	**1.764**	6843	F	11.39	**10.251**	7309	F	15.73	**14.157**
5020		6.92	**6.228**	5472		7.55	**6.795**	6214		2.34	**2.106**	6845	F	7.16	**6.444**	7313	F	5.88	**5.292**
5022		10.62	**9.558**	5473		9.72	**8.748**	6216		6.33	**5.697**	6854		4.79	**4.311**	7317	F	13.28	**11.952**
5037		18.04	**16.236**	5474		9.22	**8.298**	6217	X	5.57	**5.013**	6872	F	14.50	**13.050**	7327	F	27.43	**24.687**
5040		12.59	**11.331**	5478		7.18	**6.462**	6229		7.05	**6.345**	6874	F	21.25	**19.125**	7333	M	3.20	**2.880**
5057		5.44	**4.896**	5479		7.31	**6.579**	6233		2.74	**2.466**	6882		3.89	**3.501**	7335	M	3.55	**3.195**
5059		22.40	**20.160**	5480		6.72	**6.048**	6235		6.05	**5.445**	6884		7.10	**6.390**	7337	M	3.92	**3.528**
5102		7.18	**6.462**	5491		2.21	**1.989**	6236		8.05	**7.245**	7016	M	3.14	**2.826**	7350	F	16.97	**15.273**
5146		6.42	**5.778**	5506		6.95	**6.255**	6237		1.86	**1.674**	7024	M	3.49	**3.141**	7360		4.98	**4.482**
5160		2.82	**2.538**	5507		6.15	**5.535**	6251	D	5.74	**5.166**	7038	M	6.03	**5.427**	7370		6.41	**5.769**
5183		5.00	**4.500**	5508	D	7.12	**6.408**	6252	D	3.81	**3.429**	7046	M	9.37	**8.433**	7380		4.34	**3.906**
7382		5.86	**5.274**	7705		6.28	**5.652**	8103		3.51	**3.159**	8392		2.88	**2.592**	8811	X	0.18	**0.162**
7390		6.35	**5.715**	7710		4.12	**3.708**	8106		5.13	**4.617**	8393		2.01	**1.809**	8814	M	0.29	**0.261**
7394	M	4.57	**4.113**	7711		4.12	**3.708**	8107		3.24	**2.916**	8500		7.90	**7.110**	8815	M	0.36	**0.324**
7395	M	5.08	**4.572**	7720		3.50	**3.150**	8111		2.72	**2.448**	8601		0.46	**0.414**	8818	X	3.15	**2.835**
7398	M	5.61	**5.049**	7855		4.32	**3.888**	8116		3.08	**2.772**	8602		2.06	**1.854**	8820		0.20	**0.180**
7402		0.20	**0.180**	8001		2.99	**2.691**	8203		10.17	**9.153**	8603		0.15	**0.135**	8824		6.19	**5.571**
7403		3.68	**3.312**	8002		3.09	**2.781**	8204		5.41	**4.869**	8606		4.35	**3.915**	8825		2.78	**2.502**
7405	N	1.61	**1.449**	8006		2.68	**2.412**	8209	X	6.20	**5.580**	8709	F	7.29	**6.561**	8826		2.78	**2.502**
7420		4.00	**3.600**	8008		1.58	**1.422**	8215		5.35	**4.815**	8719		2.91	**2.619**	8829		4.16	**3.744**
7421		0.72	**0.648**	8010		2.34	**2.106**	8227		4.26	**3.834**	8720		1.26	**1.134**	8831		1.89	**1.701**
7422		1.76	**1.584**	8013		0.56	**0.504**	8232		5.28	**4.752**	8721		0.38	**0.342**	8832		0.46	**0.414**
7425		2.16	**1.944**	8015		1.20	**1.080**	8233		3.73	**3.357**	8723		0.26	**0.234**	8833		1.36	**1.224**
7431	N	0.85	**0.765**	8017	X	1.81	**1.629**	8235		6.80	**6.120**	8725		4.53	**4.077**	8835		3.85	**3.465**
7445	N	0.87	**0.783**	8018		2.88	**2.592**	8263		8.29	**7.461**	8726	F	3.36	**3.024**	8842		3.43	**3.087**
7453	N	0.46	**0.414**	8021		4.61	**4.149**	8264		5.97	**5.373**	8734	M	0.59	**0.531**	8855		0.31	**0.279**
7502		1.79	**1.611**	8031		3.51	**3.159**	8265		7.22	**6.498**	8737	M	0.53	**0.477**	8856		0.62	**0.558**
7515		1.03	**0.927**	8032		2.62	**2.358**	8279		12.56	**11.304**	8738	M	0.66	**0.594**	8864		2.49	**2.241**
7520		3.74	**3.366**	8033		2.66	**2.394**	8288	X	9.20	**8.280**	8742		0.44	**0.396**	8868		0.64	**0.576**
7538		5.94	**5.346**	8037		2.82	**2.538**	8291		5.19	**4.671**	8745		5.10	**4.590**	8869		1.62	**1.458**
7539		1.42	**1.278**	8039		2.00	**1.800**	8292		4.48	**4.032**	8748		0.80	**0.720**	8871		0.14	**0.126**
7540		3.18	**2.862**	8044		3.43	**3.087**	8293		13.36	**12.024**	8755		0.57	**0.513**	8901		0.32	**0.288**
7580		2.62	**2.358**	8046		3.11	**2.799**	8304		5.31	**4.779**	8799		0.76	**0.684**	9012		1.19	**1.071**
7590		3.53	**3.177**	8047		1.32	**1.188**	8350		5.76	**5.184**	8800		2.51	**2.259**	9014		4.48	**4.032**
7600		3.89	**3.501**	8058		3.24	**2.916**	8380		3.25	**2.925**	8803		0.11	**0.099**	9015		4.71	**4.239**
7605		2.88	**2.592**	8072		1.14	**1.026**	8381		3.33	**2.997**	8805	M	0.32	**0.288**	9016		3.83	**3.447**
7610		0.70	**0.630**	8102		3.22	**2.898**	8385		3.96	**3.564**	8810		0.24	**0.216**	9019		2.31	**2.079**
9033		3.18	**2.862**	9093		2.39	**2.151**	9410	X	1.88	**1.692**								
9040		4.83	**4.347**	9101		5.90	**5.310**	9501	X	3.64	**3.276**								
9052		3.11	**2.799**	9102		4.15	**3.735**	9505		4.91	**4.419**								
9058		2.24	**2.016**	9154		1.79	**1.611**	9516		4.74	**4.266**								
9060		2.15	**1.935**	9156		3.30	**2.970**	9519		4.80	**4.320**								
9061		2.23	**2.007**	9170		13.35	**12.015**	9521		4.04	**3.636**								
9063		1.40	**1.260**	9178		6.71	**6.039**	9522		2.71	**2.439**								
9077	F	3.83	**3.447**	9179		7.07	**6.363**	9534		4.32	**3.888**								
9078	X	8.58	**7.722**	9180		7.80	**7.020**	9554		10.91	**9.819**								
9082		1.92	**1.728**	9182		2.51	**2.259**	9586		0.75	**0.675**								
9083		1.66	**1.494**	9186		17.74	**15.966**	9600		3.73	**3.357**								
9084		2.26	**2.034**	9220		6.03	**5.427**	9620		1.50	**1.350**								
9088	a	0.00	**0.000**	9402		4.83	**4.347**												
9089		1.56	**1.404**	9403		7.07	**6.363**												

4771	NX	3.57	**3.213**	5348		6.05	**5.445**	6003		6.74	**6.066**	6801	F	10.85	**9.765**	7219		7.59	**6.831**
4777		4.26	**3.834**	5402		5.55	**4.995**	6005		5.25	**4.725**	6811		5.61	**5.049**	7222		6.86	**6.174**
4825		1.32	**1.188**	5403		9.42	**8.478**	6018		2.73	**2.457**	6824	F	12.53	**11.277**	7225		7.57	**6.813**
4828		3.12	**2.808**	5437		6.95	**6.255**	6045		5.13	**4.617**	6826	F	7.44	**6.696**	7230		7.22	**6.498**
4829		1.43	**1.287**	5443		4.00	**3.600**	6204		11.03	**9.927**	6834		4.28	**3.852**	7231		7.72	**6.948**
4902		3.21	**2.889**	5445		8.61	**7.749**	6206		3.13	**2.817**	6836		4.46	**4.014**	7232		8.80	**7.920**
4923		1.08	**0.972**	5462		8.57	**7.713**	6213		1.96	**1.764**	6843	F	11.39	**10.251**	7309	F	15.73	**14.157**
5020		6.92	**6.228**	5472		7.55	**6.795**	6214		2.34	**2.106**	6845	F	7.16	**6.444**	7313	F	5.88	**5.292**
5022		10.62	**9.558**	5473		9.72	**8.748**	6216		6.33	**5.697**	6854		4.79	**4.311**	7317	F	13.28	**11.952**
5037		18.04	**16.236**	5474		9.22	**8.298**	6217	X	5.57	**5.013**	6872	F	14.50	**13.050**	7327	F	27.43	**24.687**
5040		12.59	**11.331**	5478		7.18	**6.462**	6229		7.05	**6.345**	6874	F	21.25	**19.125**	7333	M	3.20	**2.880**
5057		5.44	**4.896**	5479		7.31	**6.579**	6233		2.74	**2.466**	6882		3.89	**3.501**	7335	M	3.55	**3.195**
5059		22.40	**20.160**	5480		6.72	**6.048**	6235		6.05	**5.445**	6884		7.10	**6.390**	7337	M	3.92	**3.528**
5102		7.18	**6.462**	5491		2.21	**1.989**	6236		8.05	**7.245**	7016	M	3.14	**2.826**	7350	F	16.97	**15.273**
5146		6.42	**5.778**	5506		6.95	**6.255**	6237		1.86	**1.674**	7024	M	3.49	**3.141**	7360		4.98	**4.482**
5160		2.82	**2.538**	5507		6.15	**5.535**	6251	D	5.74	**5.166**	7038	M	6.03	**5.427**	7370		6.41	**5.769**
5183		5.00	**4.500**	5508	D	7.12	**6.408**	6252	D	3.81	**3.429**	7046	M	9.37	**8.433**	7380		4.34	**3.906**
7382		5.86	**5.274**	7705		6.28	**5.652**	8103		3.51	**3.159**	8392		2.88	**2.592**	8811	X	0.18	**0.162**
7390		6.35	**5.715**	7710		4.12	**3.708**	8106		5.13	**4.617**	8393		2.01	**1.809**	8814	M	0.29	**0.261**
7394	M	4.57	**4.113**	7711		4.12	**3.708**	8107		3.24	**2.916**	8500		7.90	**7.110**	8815	M	0.36	**0.324**
7395	M	5.08	**4.572**	7720		3.50	**3.150**	8111		2.72	**2.448**	8601		0.46	**0.414**	8818	X	3.15	**2.835**
7398	M	5.61	**5.049**	7855		4.32	**3.888**	8116		3.08	**2.772**	8602		2.06	**1.854**	8820		0.20	**0.180**
7402		0.20	**0.180**	8001		2.99	**2.691**	8203		10.17	**9.153**	8603		0.15	**0.135**	8824		6.19	**5.571**
7403		3.68	**3.312**	8002		3.09	**2.781**	8204		5.41	**4.869**	8606		4.35	**3.915**	8825		2.78	**2.502**
7405	N	1.61	**1.449**	8006		2.68	**2.412**	8209	X	6.20	**5.580**	8709	F	7.29	**6.561**	8826		2.78	**2.502**
7420		4.00	**3.600**	8008		1.58	**1.422**	8215		5.35	**4.815**	8719		2.91	**2.619**	8829		4.16	**3.744**
7421		0.72	**0.648**	8010		2.34	**2.106**	8227		4.26	**3.834**	8720		1.26	**1.134**	8831		1.89	**1.701**
7422		1.76	**1.584**	8013		0.56	**0.504**	8232		5.28	**4.752**	8721		0.38	**0.342**	8832		0.46	**0.414**
7425		2.16	**1.944**	8015		1.20	**1.080**	8233		3.73	**3.357**	8723		0.26	**0.234**	8833		1.36	**1.224**
7431	N	0.85	**0.765**	8017	X	1.81	**1.629**	8235		6.80	**6.120**	8725		4.53	**4.077**	8835		3.85	**3.465**
7445	N	0.87	**0.783**	8018		2.88	**2.592**	8263		8.29	**7.461**	8726	F	3.36	**3.024**	8842		3.43	**3.087**
7453	N	0.46	**0.414**	8021		4.61	**4.149**	8264		5.97	**5.373**	8734	M	0.59	**0.531**	8855		0.31	**0.279**
7502		1.79	**1.611**	8031		3.51	**3.159**	8265		7.22	**6.498**	8737	M	0.53	**0.477**	8856		0.62	**0.558**
7515		1.03	**0.927**	8032		2.62	**2.358**	8279		12.56	**11.304**	8738	M	0.66	**0.594**	8864		2.49	**2.241**
7520		3.74	**3.366**	8033		2.66	**2.394**	8288	X	9.20	**8.280**	8742		0.44	**0.396**	8868		0.64	**0.576**
7538		5.94	**5.346**	8037		2.82	**2.538**	8291		5.19	**4.671**	8745		5.10	**4.590**	8869		1.62	**1.458**
7539		1.42	**1.278**	8039		2.00	**1.800**	8292		4.48	**4.032**	8748		0.80	**0.720**	8871		0.14	**0.126**
7540		3.18	**2.862**	8044		3.43	**3.087**	8293		13.36	**12.024**	8755		0.57	**0.513**	8901		0.32	**0.288**
7580		2.62	**2.358**	8046		3.11	**2.799**	8304		5.31	**4.779**	8799		0.76	**0.684**	9012		1.19	**1.071**
7590		3.53	**3.177**	8047		1.32	**1.188**	8350		5.76	**5.184**	8800		2.51	**2.259**	9014		4.48	**4.032**
7600		3.89	**3.501**	8058		3.24	**2.916**	8380		3.25	**2.925**	8803		0.11	**0.099**	9015		4.71	**4.239**
7605		2.88	**2.592**	8072		1.14	**1.026**	8381		3.33	**2.997**	8805	M	0.32	**0.288**	9016		3.83	**3.447**
7610		0.70	**0.630**	8102		3.22	**2.898**	8385		3.96	**3.564**	8810		0.24	**0.216**	9019		2.31	**2.079**
9033		3.18	**2.862**	9093		2.39	**2.151**	9410	X	1.88	**1.692**								
9040		4.83	**4.347**	9101		5.90	**5.310**	9501	X	3.64	**3.276**								
9052		3.11	**2.799**	9102		4.15	**3.735**	9505		4.91	**4.419**								
9058		2.24	**2.016**	9154		1.79	**1.611**	9516		4.74	**4.266**								
9060		2.15	**1.935**	9156		3.30	**2.970**	9519		4.80	**4.320**								
9061		2.23	**2.007**	9170		13.35	**12.015**	9521		4.04	**3.636**								
9063		1.40	**1.260**	9178		6.71	**6.039**	9522		2.71	**2.439**								
9077	F	3.83	**3.447**	9179		7.07	**6.363**	9534		4.32	**3.888**								
9078	X	8.58	**7.722**	9180		7.80	**7.020**	9554		10.91	**9.819**								
9082		1.92	**1.728**	9182		2.51	**2.259**	9586		0.75	**0.675**								
9083		1.66	**1.494**	9186		17.74	**15.966**	9600		3.73	**3.357**								
9084		2.26	**2.034**	9220		6.03	**5.427**	9620		1.50	**1.350**								
9088	a	0.00	**0.000**	9402		4.83	**4.347**												
9089		1.56	**1.404**	9403		7.07	**6.363**												

STATE OF WYOMING
WORKERS' COMPENSATION
2017 INDUSTRY BASE RATES BY CLASSIFICATION

Class (NAICS)	Industry Description	Coverage Type	2017 Industry Base Rate
000010	Clerical Office Occupations (Special Exception Classification Code)	CWD	0.41
000020	Outside Sales (Special Exception Classification Code)	CWD	1.34
000030	Inside Sales (Automotive Sales) (Special Exception Classification Code)	CWD	0.88
000040	Temporary Help - Office (Special Exception Classification Code)	CWD	0.68
000050	Temporary Help - Other (Special Exception Classification Code)	CWD	5.42
111000	Agricultural Production - Crops	OPTIONAL	5.91
112000	Agricultural Production - Livestock	OPTIONAL	8.78
113000	Forestry	OPTIONAL	5.12
113300	Logging	REQUIRED	12.45
114000	Fishing, Hunting & Trapping	OPTIONAL	3.24
115000	Support Activities for Agriculture & Forestry	OPTIONAL	7.33
211000	Oil & Gas Extraction	REQUIRED	0.68
212100	Coal Mining	REQUIRED	0.95
212200	Metal Ore Mining	REQUIRED	1.79
212300	Nonmetallic Mineral Mining & Quarrying	REQUIRED	2.08
213000	Support Activities for Mining	REQUIRED	2.92
213111	Drilling Oil & Gas Wells	REQUIRED	2.81
213112	Support Activities for Oil & Gas Operations	REQUIRED	2.31
221000	Utilities	REQUIRED	1.03
236000	Construction of Buildings	REQUIRED	5.53
237000	Heavy & Civil Engineering Construction	REQUIRED	2.64
238000	Specialty Trade Contractors	REQUIRED	3.82
311000	Food & Beverage Manufacturing	REQUIRED	5.74
312000	Beverage & Tobacco Product Manufacturing	REQUIRED	6.03
313000	Textile Mills	REQUIRED	1.74
314000	Textile Product Mills	REQUIRED	2.66
315000	Apparel Manufacturing	REQUIRED	2.50
316000	Leather & Allied Product Manufacturing	REQUIRED	5.36
321000	Wood Product Manufacturing	REQUIRED	10.34
321110	Sawmills & Wood Preservation	REQUIRED	7.79
322000	Paper Manufacturing	REQUIRED	3.17
323000	Printing & Related Support Activities	REQUIRED	1.63
324000	Petroleum & Coal Products Manufacturing	REQUIRED	1.42
325000	Chemical Manufacturing	REQUIRED	1.61
326000	Plastics & Rubber Products Manufacturing	REQUIRED	4.60
327000	Nonmetallic Mineral Product Manufacturing	REQUIRED	6.43
331000	Primary Metal Manufacturing	REQUIRED	7.98
332000	Fabricated Metal Product Manufacturing	REQUIRED	3.27
333000	Machinery Manufacturing	REQUIRED	2.67
333300	Commercial & Service Industry Machinery Manufacturing	REQUIRED	2.04
334000	Computer & Electronic Product Manufacturing	REQUIRED	1.83
335000	Electrical Equipment, Appliance, & Component Manufacturing	REQUIRED	1.81
336000	Transportation Equipment Manufacturing	REQUIRED	7.26
337000	Furniture & Related Product Manufacturing	REQUIRED	3.90
339000	Miscellaneous Manufacturing	REQUIRED	7.31
423000	Merchant Wholesalers - Durable Goods	CWD	1.71
424000	Merchant Wholesalers - Nondurable Goods	CWD	3.98
425000	Wholesale Electronic Markets & Agents & Brokers	CWD	1.42
441000	Motor Vehicle & Parts Dealers	REQUIRED	2.80
442000	Furniture & Home Furnishing Stores	OPTIONAL	3.43
443000	Electronic & Appliance Stores	OPTIONAL	2.66
444000	Building Materials & Garden Equipment & Supplies Dealers	OPTIONAL	4.02
444190	Other Building Material Dealers	REQUIRED	3.56
445000	Food & Beverage Stores	CWD	3.77

Class (NAICS)	Industry Description	Coverage Type	2017 Industry Base Rate
624000	Social Assistance	CWD	3.64
711000	Arts, Entertainment & Recreation	REQUIRED	6.69
711510	Independent Artists, Writers & Performers	REQUIRED	3.38
712000	Museums, Historical Sites & Similar Institutions	REQUIRED	1.33
713000	Amusement, Gambling & Recreation Industries	REQUIRED	4.02
713930	Marinas	REQUIRED	2.26
721000	Accommodation	REQUIRED	4.22
722000	Food Services & Drinking Places	REQUIRED	2.78
722330	Mobile Food Services	REQUIRED	1.33
811000	Repair & Maintenance	REQUIRED	2.98
811100	Automotive Repair & Maintenance	REQUIRED	3.83
812000	Personal & Laundry Services	REQUIRED	2.57
813000	Religious, Grantmaking, Civic & Similar Organizations	OPTIONAL	1.26
920000	State Government	CWD	2.25
930000	Local Government	CWD	3.20
950000	County Government	CWD	2.80
960000	Fire Protection NOC	CWD	5.98
* Contact the Division for details (CWD)			
COVERAGE TYPE:			
Required:	Employer MUST obtain WC coverage from the Division		
Optional:	Employer may elect WC coverage from the Division. Once elected, coverage must be retained for 2 full years		
CWD:	Employer must check with the Division for coverage requirements		

STATE OF WYOMING
WORKERS' COMPENSATION
2019 INDUSTRY BASE RATES BY CLASSIFICATION

Class (NAICS)	Industry Description	2019 Industry Base Rate	Coverage Type
000010	Clerical Office Occupations (Special Exception Classification Code)	0.40	CWD
000020	Outside Sales (Special Exception Classification Code)	1.41	CWD
000030	Inside Sales (Automotive Sales) (Special Exception Classification Code)	0.97	CWD
000040	Temporary Help - Office (Special Exception Classification Code)	0.80	CWD
000050	Temporary Help - Other (Special Exception Classification Code)	4.00	CWD
111000	Agricultural Production - Crops	3.88	OPTIONAL
112000	Agricultural Production - Livestock	7.49	OPTIONAL
113000	Forestry	3.84	OPTIONAL
113300	Logging	8.63	REQUIRED
114000	Fishing, Hunting & Trapping	2.12	OPTIONAL
115000	Support Activities for Agriculture & Forestry	5.88	OPTIONAL
211000	Oil & Gas Extraction	0.55	REQUIRED
212100	Coal Mining	0.98	REQUIRED
212200	Metal Ore Mining	1.59	REQUIRED
212300	Nonmetallic Mineral Mining & Quarrying	1.71	REQUIRED
213000	Support Activities for Mining	2.11	REQUIRED
213111	Drilling Oil & Gas Wells	2.48	REQUIRED
213112	Support Activities for Oil & Gas Operations	1.88	REQUIRED
221000	Utilities	1.09	REQUIRED
236000	Construction of Buildings	4.81	REQUIRED
237000	Heavy & Civil Engineering Construction	2.59	REQUIRED
238000	Specialty Trade Contractors	3.73	REQUIRED
311000	Food & Beverage Manufacturing	4.53	REQUIRED
312000	Beverage & Tobacco Product Manufacturing	5.08	REQUIRED
313000	Textile Mills	1.63	REQUIRED
314000	Textile Product Mills	2.50	REQUIRED
315000	Apparel Manufacturing	1.86	REQUIRED
316000	Leather & Allied Product Manufacturing	4.93	REQUIRED
321000	Wood Product Manufacturing	10.77	REQUIRED
321110	Sawmills & Wood Preservation	8.40	REQUIRED
322000	Paper Manufacturing	2.50	REQUIRED
323000	Printing & Related Support Activities	1.53	REQUIRED

621400	Outpatient Care Centers	0.87	REQUIRED
622000	Hospitals	1.48	REQUIRED
623100	Nursing Care Facilities	4.37	REQUIRED
623200	Residential Mental Health & Substance Abuse Facilities	6.73	REQUIRED
623300	Community Care Facilities for Elderly	4.72	REQUIRED
623900	Other Residential Care Facilities	3.49	REQUIRED
624000	Social Assistance	3.22	CWD
711000	Arts, Entertainment & Recreation	4.90	REQUIRED
711510	Independent Artists, Writers & Performers	3.00	REQUIRED
712000	Museums, Historical Sites & Similar Institutions	1.09	REQUIRED
713000	Amusement, Gambling & Recreation Industries	3.88	REQUIRED
713930	Marinas	2.08	REQUIRED
721000	Accommodation	3.90	REQUIRED
722000	Food Services & Drinking Places	2.40	REQUIRED
722330	Mobile Food Services	1.07	REQUIRED
811000	Repair & Maintenance	2.29	REQUIRED
811100	Automotive Repair & Maintenance	3.15	REQUIRED
812000	Personal & Laundry Services	2.68	CWD
813000	Religious, Grantmaking, Civic & Similar Organizations	1.03	OPTIONAL
920000	State Government	2.06	CWD
930000	Local Government	3.56	CWD
950000	County Government	2.49	CWD
960000	Fire Protection NOC	6.66	CWD
Contact the Division for Details (CWD)			
Required	Employer MUST obtain WC coverage from the Division.		
Optional	Employer may elect WC coverage fron the Division. Once elected, coverage must be retianed for 2 full years		
CWD	Employer must check with the Division for coverage requirements.		

WORKFORCE SAFETY & INSURANCE
MANUAL RATES - 2014 / 2015

DESCRIPTION	CLASS	BASE RATE 07/01/13	BASE RATE 07/01/14	AMT CHANGE	PERCENT CHANGE	MAX PP CHARGE 07/01/13 $31,800	MAX PP CHARGE 07/01/14 $33,600
Electrical - Wiring - Svc. & Repair	5190	3.65	3.67	0.02	0.5%	1,160.70	1,233.12
Concrete Work	5205	5.17	4.80	(0.37)	-7.2%	1,644.06	1,612.80
Plastering-Stucco-Drywall	5345	9.36	9.69	0.33	3.5%	2,976.48	3,255.84
Building Construction	5410	8.96	8.40	(0.56)	-6.3%	2,849.28	2,822.40
Painting and Paper Hanging	5474	5.47	5.37	(0.10)	-1.8%	1,739.46	1,804.32
Floor Covering Installation	5502	5.89	6.65	0.76	12.9%	1,873.02	2,234.40
Roofing-Hot Tar Method & Sandblast	5545	13.75	14.10	0.35	2.5%	4,372.50	4,737.60
Consulting Engineers	5603	0.83	0.75	(0.08)	-9.6%	263.94	252.00
Street and Road Construction	6042	4.34	4.80	0.46	10.6%	1,380.12	1,612.80
Water Well Drilling Operations	6200	18.50	20.91	2.41	13.0%	5,883.00	7,025.76
Oil and Gas Development - Drilling	6203	8.80	8.01	(0.79)	-9.0%	2,798.40	2,691.36
Oil & Gas Well Sply. Or Equip. Dlrs.	6204	2.69	3.04	0.35	13.0%	855.42	1,021.44
Oil Well Trucking	6205	8.85	9.00	0.15	1.7%	2,814.30	3,024.00
Oil Well Servicing	6206	5.48	5.21	(0.27)	-4.9%	1,742.64	1,750.56
Oil and Gas Instrument Logging	6208	1.49	1.63	0.14	9.4%	473.82	547.68
Junk and Scrap Metal Dealers	6209	5.96	5.34	(0.62)	-10.4%	1,895.28	1,794.24
Bldg. Moving - Demolition - Salvage	6210	9.64	10.89	1.25	13.0%	3,065.52	3,659.04
Excavating	6221	4.18	4.07	(0.11)	-2.6%	1,329.24	1,367.52
Dredging	6223	13.93	13.69	(0.24)	-1.7%	4,429.74	4,599.84
Tunnel Construction	6233	TBA	TBA	TBA	TBA	TBA	TBA
Caisson Work	6253	45.32	42.98	(2.34)	-5.2%	14,411.76	14,441.28
Sewer-Water-Gas-Oil-Pipeline Const.	6301	4.15	3.85	(0.30)	-7.2%	1,319.70	1,293.60
Fence Construction	6400	4.75	4.32	(0.43)	-9.1%	1,510.50	1,451.52
Trucking and Hauling	7215	9.16	9.15	(0.01)	-0.1%	2,912.88	3,074.40
Explosive Ammunition Handlers	7217	7.25	7.20	(0.05)	-0.7%	2,305.50	2,419.20
Chauffeurs-School Bus - Ambulance	7380	3.88	4.38	0.50	12.9%	1,233.84	1,471.68
Ice Handling	7384	6.76	6.42	(0.34)	-5.0%	2,149.68	2,157.12
Aircraft Ground Crew Operations	7403	2.37	2.24	(0.13)	-5.5%	753.66	752.64
Aircraft Flying Operation	7405	2.38	1.98	(0.40)	-16.8%	756.84	665.28
Specialized Aircraft Operations	7420	35.54	29.50	(6.04)	-17.0%	11,301.72	9,912.00
Gas Works	7500	2.02	1.86	(0.16)	-7.9%	642.36	624.96
Water Works	7520	4.29	3.71	(0.58)	-13.5%	1,364.22	1,246.56
Electric Light & Power Const. - REA	7529	3.84	3.75	(0.09)	-2.3%	1,221.12	1,260.00
Electric Light & Power Companies	7531	1.98	2.03	0.05	2.5%	629.64	682.08
Elec. Ligt./Power Const./Invest. Own.	7533	2.01	1.90	(0.11)	-5.5%	639.18	638.40
Electric Light/Power Const. - Special	7534	5.12	5.78	0.66	12.9%	1,628.16	1,942.08
Electronic Equip. - Install. & Repair	7535	1.18	1.19	0.01	0.8%	375.24	399.84
Telephone Operations	7600	1.03	1.12	0.09	8.7%	327.54	376.32
Telephone and Cable Line Const.	7601	2.70	2.58	(0.12)	-4.4%	858.60	866.88
Radio and Television	7602	0.37	0.41	0.04	10.8%	117.66	137.76
Cable Install. - Service & Repair	7603	4.17	3.46	(0.71)	-17.0%	1,326.06	1,162.56
Switching & Switchboard Repairing	7605	0.30	0.30	0.00	0.0%	95.40	100.80
Fire Departments - Paid Employees	7700	6.84	6.43	(0.41)	-6.0%	2,175.12	2,160.48
Fire Departments - Volunteer	7710	53.72PC	59.01PC	5.29	9.8%	N/A	N/A
Emergency Response Members & Volunteers	7715 **	N/A	N/A	N/A	N/A	250.00	250.00
Law Enforcement	7720	3.06	3.02	(0.04)	-1.3%	973.08	1,014.72
Stores - Retail	8000 *	1.72	1.67	(0.05)	-2.9%	546.96	561.12
Full-Line Department Stores	8001 *	2.34	2.14	(0.20)	-8.5%	744.12	719.04

Minimum Premium - Proposed - $250, Current - $250

*Composite Rate Classification

**Risk Free Class Subject to $250 Minimum

PC = Per 100 Capita

PP = Per Person

Prepared by Employer Services 3/21/2014

WORKFORCE SAFETY & INSURANCE
MANUAL RATES - 2018 / 2019

DESCRIPTION	CLASS	BASE RATE 7/1/2017	BASE RATE 7/1/2018	$ AMT CHANGE	PERCENT CHANGE	MAX PP CHARGE 7/1/2017 $35,100	MAX PP CHARGE 7/1/2018 $35,500
Electrical - Wiring - Svc. & Repair	**5190**	2.97	2.63	(0.34)	-11.4%	1,042.47	933.65
Concrete Work	**5205**	4.86	4.71	(0.15)	-3.1%	1,705.86	1,672.05
Plastering-Stucco-Drywall	**5345**	8.66	7.42	(1.24)	-14.3%	3,039.66	2,634.10
Building Construction	**5410**	6.95	6.44	(0.51)	-7.3%	2,439.45	2,286.20
Painting and Paper Hanging	**5474**	3.29	2.91	(0.38)	-11.6%	1,154.79	1,033.05
Floor Covering Installation	**5502**	7.86	7.37	(0.49)	-6.2%	2,758.86	2,616.35
Roofing-Hot Tar Method & Sandblast	**5545**	13.74	12.99	(0.75)	-5.5%	4,822.74	4,611.45
Consulting Engineers	**5603**	0.64	0.61	(0.03)	-4.7%	224.64	216.55
Street and Road Construction	**6042**	4.80	4.46	(0.34)	-7.1%	1,684.80	1,583.30
Water Well Drilling Operations	**6200**	11.77	9.86	(1.91)	-16.2%	4,131.27	3,500.30
Oil and Gas Development - Drilling	**6203**	7.37	6.23	(1.14)	-15.5%	2,586.87	2,211.65
Oil & Gas Well Sply. Or Equip. Dlrs.	**6204**	3.59	3.49	(0.10)	-2.8%	1,260.09	1,238.95
Oil Well Trucking	**6205**	10.74	10.74	0.00	0.0%	3,769.74	3,812.70
Oil Well Servicing	**6206**	6.06	6.02	(0.04)	-0.7%	2,127.06	2,137.10
Oil and Gas Instrument Logging	**6208**	1.90	2.04	0.14	7.4%	666.90	724.20
Junk and Scrap Metal Dealers	**6209**	3.52	3.06	(0.46)	-13.1%	1,235.52	1,086.30
Bldg. Moving - Demolition - Salvage	**6210**	9.17	7.60	(1.57)	-17.1%	3,218.67	2,698.00
Excavating	**6221**	2.68	2.25	(0.43)	-16.0%	940.68	798.75
Dredging	**6223**	11.43	10.37	(1.06)	-9.3%	4,011.93	3,681.35
Tunnel Construction	**6233**	TBA	TBA	TBA	TBA	TBA	TBA
Caisson Work	**6253**	34.20	30.79	(3.41)	-10.0%	12,004.20	10,930.45
Sewer-Water-Gas-Oil-Pipeline Const.	**6301**	2.92	2.42	(0.50)	-17.1%	1,024.92	859.10
Fence Construction	**6400**	3.30	3.03	(0.27)	-8.2%	1,158.30	1,075.65
Trucking and Hauling	**7215**	7.84	7.29	(0.55)	-7.0%	2,751.84	2,587.95
Explosive Ammunition Handlers	**7217**	6.25	5.69	(0.56)	-9.0%	2,193.75	2,019.95
Chauffeurs-School Bus - Ambulance	**7380**	3.97	3.37	(0.60)	-15.1%	1,393.47	1,196.35
Ice Handling	**7384**	5.73	5.17	(0.56)	-9.8%	2,011.23	1,835.35
Aircraft Ground Crew Operations	**7403**	1.99	1.97	(0.02)	-1.0%	698.49	699.35
Aircraft Flying Operation	**7405**	1.81	1.94	0.13	7.2%	635.31	688.70
Specialized Aircraft Operations	**7420**	17.31	17.78	0.47	2.7%	6,075.81	6,311.90
Gas Works	**7500**	1.49	1.43	(0.06)	-4.0%	522.99	507.65
Water Works	**7520**	3.39	3.64	0.25	7.4%	1,189.89	1,292.20
Electric Light & Power Const. - REA	**7529**	2.58	2.32	(0.26)	-10.1%	905.58	823.60
Electric Light & Power Companies	**7531**	1.81	1.94	0.13	7.2%	635.31	688.70
Elec. Light./Power Const./Invest. Own.	**7533**	1.59	1.58	(0.01)	-0.6%	558.09	560.90
Electric Light/Power Const. - Special	**7534**	6.37	5.52	(0.85)	-13.3%	2,235.87	1,959.60
Electronic Equip. - Install. & Repair	**7535**	1.31	1.25	(0.06)	-4.6%	459.81	443.75
Telephone Operations	**7600**	1.48	1.59	0.11	7.4%	519.48	564.45
Telephone and Cable Line Const.	**7601**	2.31	2.26	(0.05)	-2.2%	810.81	802.30
Radio and Television	**7602**	0.48	0.43	(0.05)	-10.4%	168.48	152.65
Cable Install. - Service & Repair	**7603**	2.60	2.47	(0.13)	-5.0%	912.60	876.85
Switching & Switchboard Repairing	**7605**	0.27	0.26	(0.01)	-3.7%	94.77	92.30
Fire Departments - Paid Employees	**7700**	4.69	4.90	0.21	4.5%	1,646.19	1,739.50
Fire Departments - Volunteer	**7710**	71.20PC	71.52PC	0.32	0.4%	N/A	N/A
Emergency Response Members & Volunteers	**7715** **	N/A	N/A	N/A	N/A	250.00	250.00
Law Enforcement	**7720**	2.75	2.41	(0.34)	-12.4%	965.25	855.55
Stores - Retail	**8000** *	1.19	1.01	(0.18)	-15.1%	417.69	358.55
Full-Line Department Stores	**8001** *	1.68	1.54	(0.14)	-8.3%	589.68	546.70

Minimum Premium - Proposed - $250, Current - $250

*Composite Rate Classification

**Risk Free Class Subject to $250 Minimum

PC = Per 100 Capita

PP = Per Person

Prepared by Employer Services 3/26/2018

NEW MEXICO
Page S2
Original Printing

WORKERS COMPENSATION AND EMPLOYERS LIABILITY

Effective January 1, 2009

APPLICABLE TO ASSIGNED RISK POLICIES ONLY

CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM
4439	5.38	750	5223	8.31	750	6703M*	27.05	750	7423	–	–	8204	5.98	750
4452	5.65	750	5348	7.36	750	6704M*	15.63	750	7425	17.18	750	8209	11.85	750
4459	6.87	750	5402	9.59	750	6801F	10.51	750	7431N	4.11	750	8215	8.85	750
4470	4.57	750	5403	18.00	750	6811	9.20	750	7445N	1.95	–	8227	17.84	750
4484	6.19	750	5437	7.36	750	6824F	24.66	750	7453N	2.22	–	8232	8.98	750
4493	10.41	750	5443	8.06	750	6826F	20.39	750	7502	5.14	750	8233	12.09	750
4511	1.33	410	5445	14.02	750	6834	14.77	750	7515	2.11	515	8235	10.98	750
4557	4.00	750	5462	21.18	750	6836	8.03	750	7520	7.28	750	8236X	18.07	750
4558	7.25	750	5472	10.13	750	6843F	26.52	750	7538	28.84	750	8263	24.29	750
4561	5.87	750	5473	15.64	750	6845F	35.06	750	7539	4.65	750	8264	9.90	750
4568	6.22	750	5474	11.90	750	6854	12.15	750	7540	6.36	750	8265	13.50	750
4581	4.38	750	5478	7.20	750	6872F	38.38	750	7580	6.65	750	8279	13.77	750
4583	7.76	750	5479	13.47	750	6874F	63.91	750	7590	10.01	750	8288	13.69	750
4611	3.27	671	5480	15.53	750	6882	8.39	750	7600	6.79	750	8291	8.22	750
4635	5.33	750	5491	4.32	750	6884	19.88	750	7601	13.66	750	8292	5.87	750
4653	4.90	750	5506	22.60	750	7016M	11.63	750	7605	5.70	750	8293	18.07	750
4665	30.16	750	5507	13.01	750	7024M	12.93	750	7610	1.89	485	8304	14.66	750
4670	11.36	750	5508D	23.14	750	7038M	14.39	750	7611	11.18	750	8350	12.12	750
4683	7.30	750	5535	6.24	750	7046M	26.43	750	7612	25.88	750	8370X	6.60	750
4686	5.17	750	5536	–	–	7047M	22.37	750	7613	8.39	750	8380	5.17	750
4692	1.08	376	5537	11.95	750	7050M	27.67	750	7704	–	–	8381	4.30	750
4693	1.54	438	5538	–	–	7090M	15.99	750	7705	10.39	750	8385	5.92	750
4703	9.98	750	5551	39.03	750	7098M	29.35	750	7710	10.82	750	8392	6.95	750
4717	4.90	750	5606	3.39	688	7099M	50.80	750	7711	10.82	750	8393X	3.65	723
4720	8.17	750	5610	9.29	750	7133	8.12	750	7720	6.36	750	8500	14.66	750
4740	5.19	750	5645	24.90	750	7151M	9.87	750	7855	11.63	750	8601	1.60	446
4741	3.73	734	5651	20.42	750	7152M	18.96	750	8001	4.38	750	8606	5.06	750
4743X	1.89	485	5703	37.32	750	7153M	10.96	750	8002	3.71	731	8709F	11.94	750
4751	4.11	750	5705	14.56	750	7222	17.45	750	8006	3.76	738	8719	4.92	750
4771N	7.22	750	5951	1.24	397	7228	16.01	750	8008	3.25	669	8720	6.87	750
4777	8.93	750	6003	20.37	750	7229	13.88	750	8010	4.63	750	8721	1.54	438
4825	2.81	609	6005	11.08	750	7230	16.07	750	8013	1.22	395	8726F	12.10	750
4828	2.98	632	6017	13.63	750	7231	13.42	750	8015	1.33	410	8734M	1.54	438
4829	3.62	719	6018	11.13	750	7232	12.15	750	8017	4.27	750	8737M	1.38	416
4902	4.92	750	6045	6.68	750	7309F	47.97	750	8018	6.46	750	8738M	2.65	588
4923	2.79	607	6204	29.06	750	7313F	10.10	750	8021	5.36	750	8742	1.14	384
5020	11.33	750	6206	8.28	750	7317F	20.50	750	8031	8.82	750	8745	9.22	750
5022	15.88	750	6213	7.14	750	7327F	21.36	750	8032	5.11	750	8748	1.65	453
5037	78.59	750	6214	6.31	750	7333M	11.50	750	8033	4.11	750	8755	0.84	343
5040	44.89	750	6216	14.13	750	7335M	12.77	750	8039	3.49	701	8799	3.11	650
5057	47.45	750	6217	9.67	750	7337M	22.10	750	8044	5.46	750	8800	3.11	650
5059	119.61	750	6229	12.25	750	7350F	27.01	750	8045	2.41	555	8803	0.30	271
5069	69.15	750	6233	9.59	750	7360	9.36	750	8046X	6.28	750	8805M	1.11	380
5102	13.94	750	6235	16.38	750	7370	10.39	750	8047	1.87	482	8810	0.81	339
5146	12.63	750	6236	44.03	750	7380	8.41	750	8050	–	–	8814M	0.97	361
5160	10.67	750	6237	7.20	750	7382	11.25	750	8058	7.66	750	8815M	1.89	485
5183	8.71	750	6251D	13.79	750	7390	11.42	750	8072	2.65	588	8820	0.49	296
5188	7.23	750	6252D	40.76	750	7394M	23.24	750	8102	5.65	750	8824	7.95	750
5190	8.39	750	6260	14.29	750	7395M	25.81	750	8103	7.44	750	8825	6.38	750
5191	1.70	460	6306	11.98	750	7398M	44.66	750	8105	11.44	750	8826	6.28	750
5192	12.82	750	6319	14.21	750	7403	12.44	750	8106	14.26	750	8829	8.90	750
5213	14.67	750	6325	13.22	750	7405N	3.60	750	8107	8.57	750	8831	3.49	701
5215	12.28	750	6400	15.59	750	7420	31.24	750	8111	5.71	750	8832	1.24	397
5221	12.11	750	6504	7.84	750	7421	3.16	657	8116	6.52	750	8833*	3.27	671
5222	12.41	750	6702M*	14.07	750	7422	6.17	750	8203	11.96	750	8835	5.92	750

REFER TO UPDATE PAGE FOR ALL SUBSEQUENT REVISIONS TO ALL CLASS CODES

* Refer to the Footnotes Page for additional information on this class code.

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WORKERS COMPENSATION AND EMPLOYERS LIABILITY

Effective January 1, 2019

APPLICABLE TO ASSIGNED RISK POLICIES ONLY

CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM
4568	4.12	716	5474	12.05	1000	6874F	37.69	1000	7540	5.86	951	8293	16.64	1000
4581	1.82	406	5478	7.82	1000	6882	6.71	1000	7580	5.72	932	8304	16.56	1000
4583	8.91	1000	5479	12.34	1000	6884	9.68	1000	7590	6.21	998	8350	11.42	1000
4611	2.01	431	5480	11.25	1000	7016M	5.27	871	7600	10.33	1000	8370X	9.79	1000
4635	5.22	865	5491	4.01	701	7024M	5.86	951	7605	4.36	749	8380	4.52	770
4653	3.05	572	5506	14.32	1000	7038M	11.74	1000	7610	3.91	688	8381	4.09	712
4665	12.12	1000	5507	7.87	1000	7046M	20.22	1000	7705	9.50	1000	8385	4.92	824
4670	14.55	1000	5508D	14.21	1000	7047M	8.56	1000	7710	6.63	1000	8392	4.15	720
4683	7.44	1000	5535	13.12	1000	7050M	19.18	1000	7711	6.63	1000	8393X	3.16	587
4686	4.25	734	5537	9.32	1000	7090M	13.05	1000	7720	4.87	817	8500	12.97	1000
4692	1.61	377	5551	32.96	1000	7098M	22.47	1000	7855	7.87	1000	8601	0.99	294
4693	1.85	410	5606	1.82	406	7099M	32.93	1000	8001	3.91	688	8602	3.80	673
4703	3.85	680	5610	10.12	1000	7133	5.27	871	8002	3.93	691	8603	0.27	196
4717	3.85	680	5645	24.34	1000	7151M	6.37	1000	8006	4.04	705	8606	4.95	828
4720	5.72	932	5703	30.53	1000	7152M	10.41	1000	8008	2.33	475	8709F	12.81	1000
4740	1.61	377	5705	34.22	1000	7153M	7.12	1000	8010	4.49	766	8719	5.06	843
4741	4.31	742	5951	0.80	268	7219X	14.02	1000	8013	0.94	287	8720X	2.19	456
4743X	1.42	352	6003	12.26	1000	7222	17.09	1000	8015	1.61	377	8721	0.75	261
4751	3.42	622	6005	5.76	938	7225	12.52	1000	8017	3.53	637	8723	0.54	233
4771N	4.41	861	6017	–	–	7228	–	–	8018	5.03	839	8725	5.97	966
4777	6.37	1000	6018	5.63	920	7229	–	–	8021	5.56	911	8726F	5.72	932
4825	1.85	410	6045	8.04	1000	7230	14.04	1000	8031	5.72	932	8734M	1.39	348
4828	3.18	589	6204	15.21	1000	7231	14.77	1000	8032	3.88	684	8737M	1.26	330
4829	3.21	593	6206	7.63	1000	7232	13.21	1000	8033	5.14	854	8738M	2.03	434
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5188	6.80	1000	6319	7.55	1000	7394M	7.44	1000	8111	3.69	658	8825	4.28	738
5190	5.87	952	6325	11.81	1000	7395M	8.27	1000	8116	4.73	799	8826	4.33	745
5191	1.58	373	6400	11.00	1000	7398M	12.09	1000	8203	12.17	1000	8829	5.51	904
5192	5.56	911	6503	4.07	709	7402	0.67	250	8204	7.46	1000	8831	2.94	557
5213	10.58	1000	6504	8.03	1000	7403	9.79	1000	8209	8.72	1000	8832	0.75	261
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5222	19.01	1000	6704M*	10.59	1000	7421	1.77	399	8232	9.63	1000	8842	4.98	832
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5472	11.43	1000	6854	9.50	1000	7538	12.66	1000	8291	7.06	1000	9014	5.89	955
5473	17.70	1000	6872F	23.94	1000	7539	2.81	539	8292	6.34	1000	9015	6.34	1000

REFER TO UPDATE PAGE FOR ALL SUBSEQUENT REVISIONS TO ALL CLASS CODES

* Refer to the Footnotes Page for additional information on this class code.

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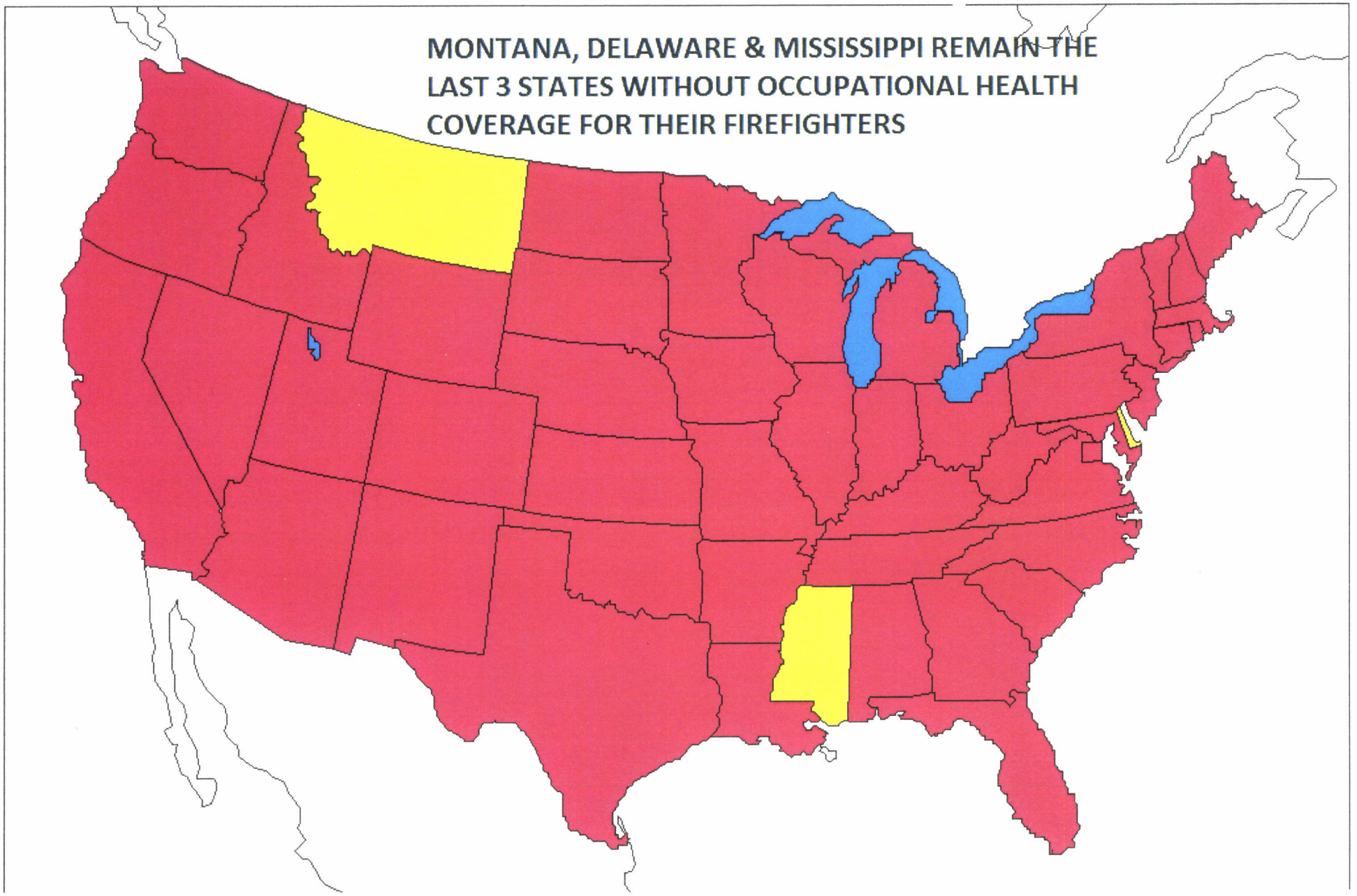
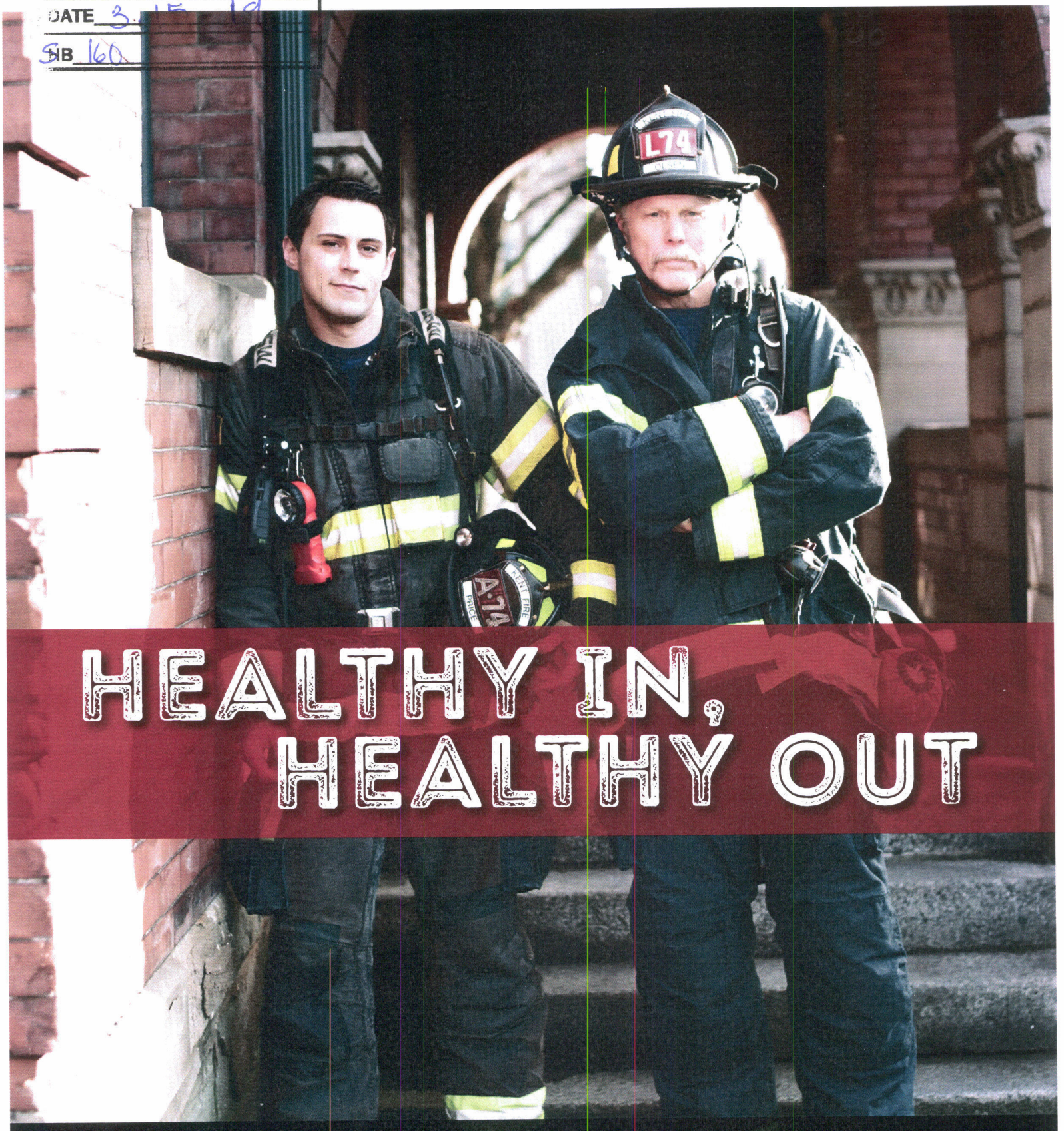
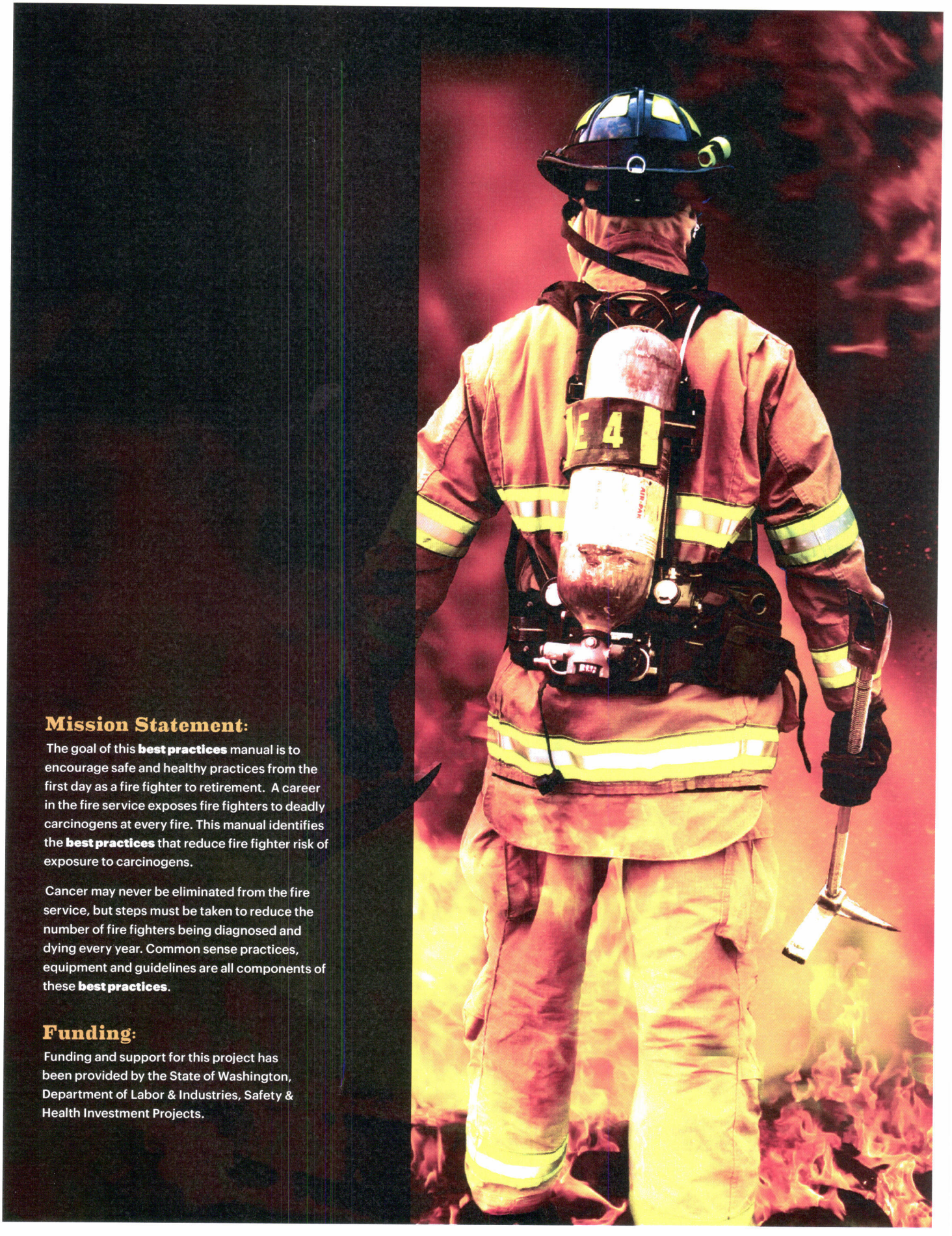

MONTANA, DELAWARE & MISSISSIPPI REMAIN THE
LAST 3 STATES WITHOUT OCCUPATIONAL HEALTH
COVERAGE FOR THEIR FIREFIGHTERS

EXHIBIT 2
DATE 3.15.19
SB 160



HEALTHY IN, HEALTHY OUT

Best Practices for Reducing Fire Fighter Risk of Exposures to Carcinogens



Mission Statement:

The goal of this **best practices** manual is to encourage safe and healthy practices from the first day as a fire fighter to retirement. A career in the fire service exposes fire fighters to deadly carcinogens at every fire. This manual identifies the **best practices** that reduce fire fighter risk of exposure to carcinogens.

Cancer may never be eliminated from the fire service, but steps must be taken to reduce the number of fire fighters being diagnosed and dying every year. Common sense practices, equipment and guidelines are all components of these **best practices**.

Funding:

Funding and support for this project has been provided by the State of Washington, Department of Labor & Industries, Safety & Health Investment Projects.

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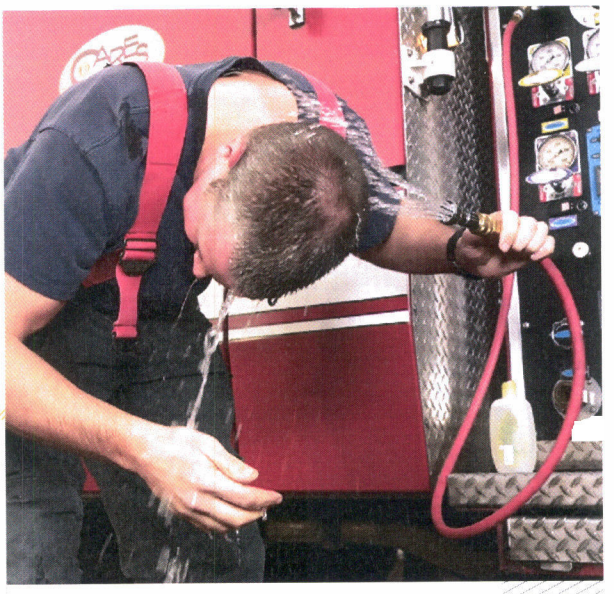

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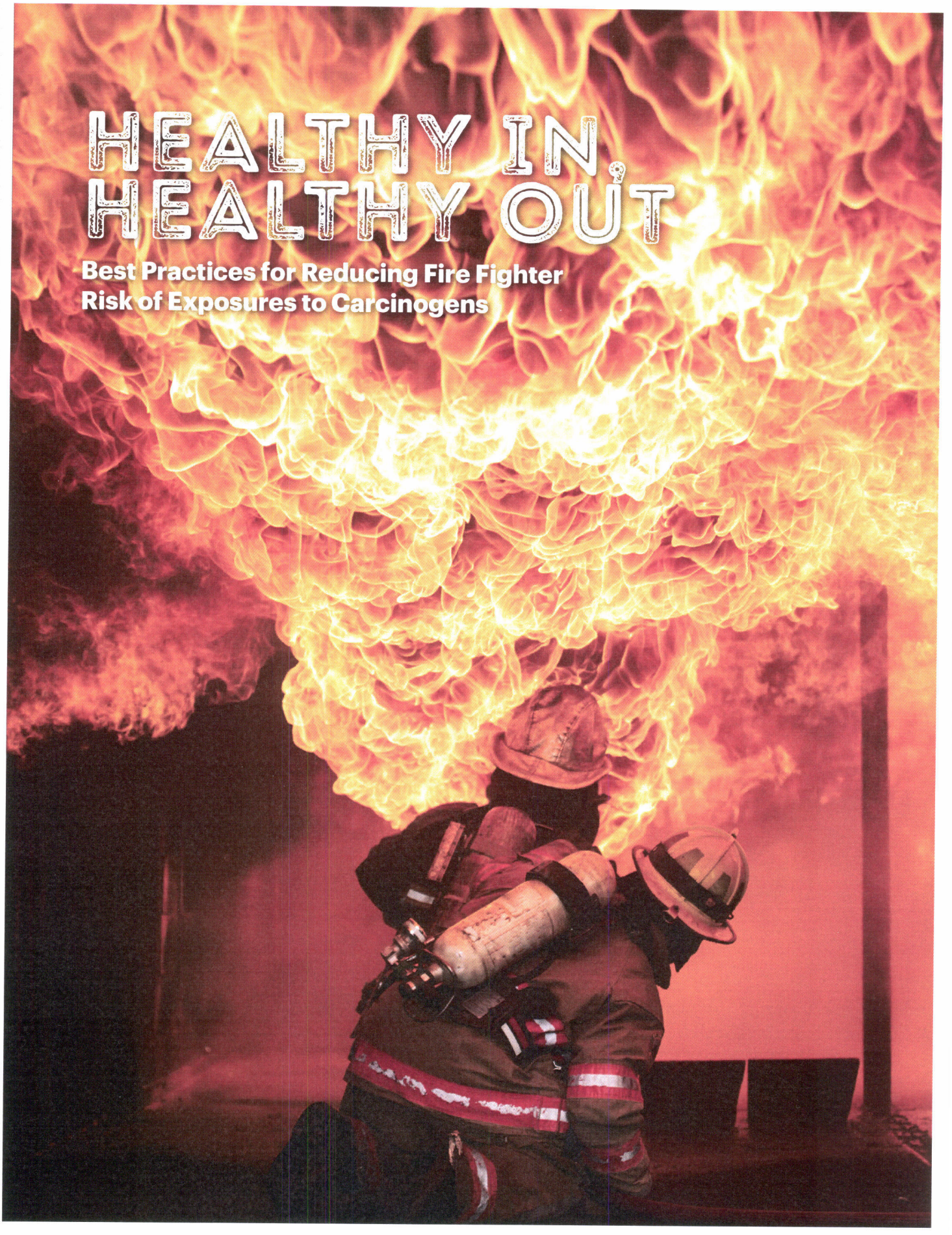


HEALTHY IN, HEALTHY OUT

Best Practices for Reducing Fire Fighter Risk of Exposures to Carcinogens

In 2014, a Safety & Health Investment Projects (SHIP) grant project received the funds to establish a manual on the "**Best Practices** for Reducing Fire Fighter Risk of Exposures to Carcinogens." The Washington State Council of Fire Fighters (WSCFF) provided the technical panel with members from the International Association of Fire Fighters (IAFF) locally across the state of Washington.

This technical panel searched fire service agencies across the state, the country and the world to identify the current practices that will, to the greatest extent possible, reduce the risk of exposures to carcinogens for fire fighting activities. The Kent Fire Department and the WSCFF jointly applied to the State of Washington Labor & Industries', Safety & Health Investment Projects (SHIP) and were awarded this grant in 2014.

A **best practice** is a method or technique that identifies a standard way of doing something that multiple organizations can use and adopt. A **best practice** can, and will, evolve to become better as improvements are discovered.

Today, structural hood manufacturers are designing prototypes that will help reduce dermal absorption. An AFG-funded research project is currently underway to address fire fighter personal protective equipment (PPE) cleaning validation.

A best practice is a method or technique that identifies a standard way of doing something that multiple organizations can use and adopt.

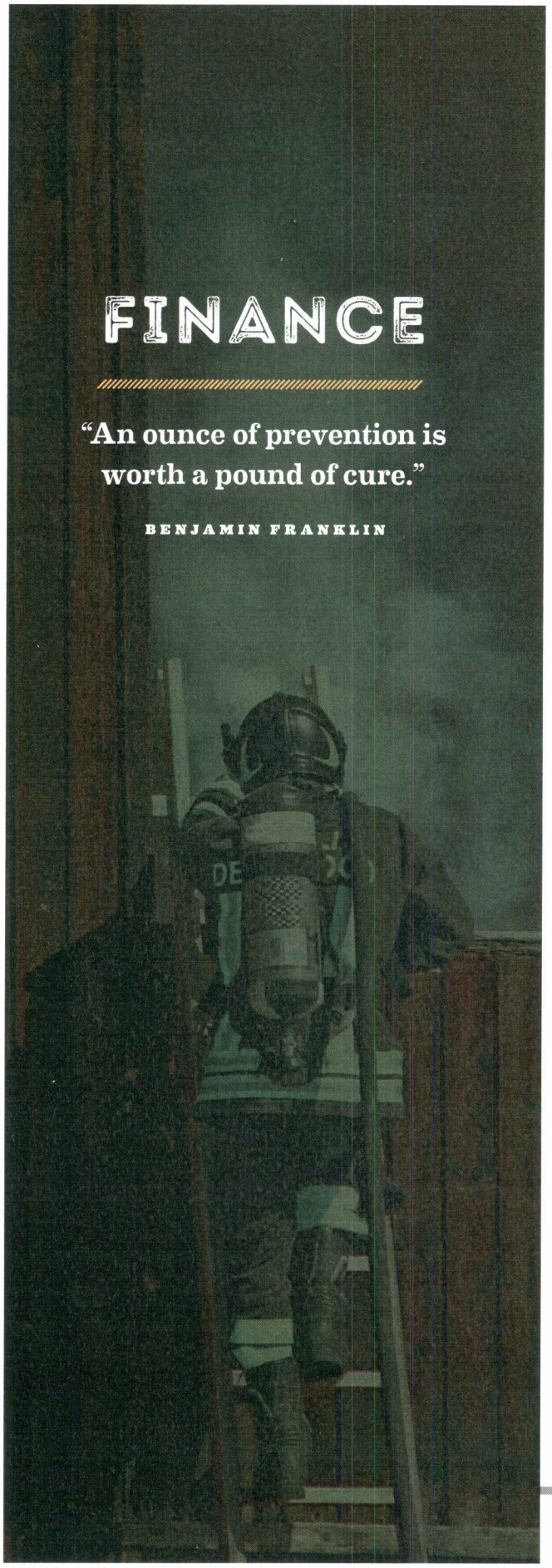
"If I had any advice for you, (it) is to pay as close attention to your body as you can. Even the tiniest bump could prove to be much worse than you ever could imagine it would be. When you do get that unfortunate news, go straight away to the best people in the area... This program can absolutely save your life."

Donovan Eckhardt, Renton Fire and Emergency Services Department Fire Fighter, passed August 24, 2015 after a two-year battle with squamous cell carcinoma.

The University of Illinois Fire Service Institute (IFSI) has received a grant from the Federal Emergency Management Agency (FEMA) to continue its research on fire fighting exposures to occupational cardiovascular and chemical risks. In 2016, the University of Washington hopes to validate this **best practices** manual by testing the efficacy of methods identified within through another SHIP grant. This topic will be revisited periodically to identify the next practices that will continue to reduce fire fighter exposures to carcinogens.

This document is organized in the format of the Incident Management System (IMS) with Finance, Command, Planning, Operations and Logistics sections.

While not every fire department will have the capability or the budget capacity to implement these practices, this document refers to the **best practices** that have been identified to reduce exposures to carcinogens in the hopes of propagating potential change.



FINANCE

"An ounce of prevention is worth a pound of cure."

BENJAMIN FRANKLIN

Over time, it has been shown that sick and injured members create financial costs to their organizations. The overall concept of this manual is to keep members safe from exposures, while protecting organizations from long-term injury, illness and even death.

Considering these various **best practices** and their implementation, fire departments may use a phased-in approach as necessary. While many of the practices identify low cost items like garbage bags, other items have a significant cost.

A fiscal analysis considers the money available, the money requested and the money actually spent. Fire departments are unique, they are funded differently—some are municipalities, some are fire districts, some employ career fire fighters, some have volunteers and some are combinations. In seeking a funding solution to implement the **best practices**, a "one size fits all" approach will not work for all fire departments. A fiscal analysis should be conducted to determine the level of participation for each individual department.

Funding sources to consider include local fees associated with fire and building permits as allowed, sales tax, real estate excise tax, impact fees, bonds, levies and fees for service. Grants, including Assistance to Firefighters Grant (AFG) may be considered for alternative funding for major/capital purchases.

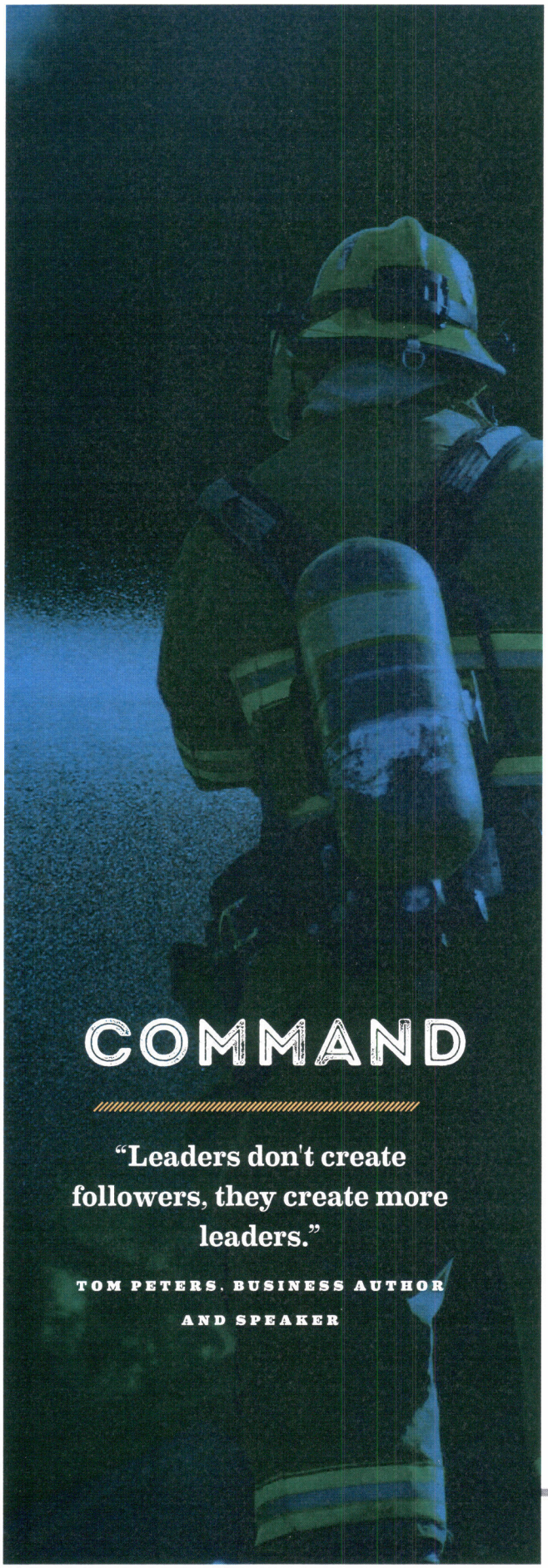
IN THE LOW COST CATEGORY, ITEMS CAN INCLUDE:

- **2-3 mil, 42-gallon garbage bags for transporting contaminated PPE, equipment and hose; can be purchased for approximately 50 cents per bag**
- **Emergency Medical Services (EMS) latex or nitrile gloves**
- **N95 respirator for protection**
- **Splash gown**
- **Disposable wipes**
- **Hand wash station on every fire engine; retrofitting with time and materials for approximately $300**
- **Station shoes; can range from $30 to $60**

ON THE HIGHER COST END, ITEMS TO FUND CAN INCLUDE:

- Annual physicals for all suppression personnel, including cancer screening
- Initiating wellness/fitness programs
- Purchasing two sets of turnouts for all suppression personnel; having a variety of sizes available to wear while contaminated set is being cleaned is an option
- Direct source diesel exhaust capture and removal systems
- PPE cleaning by an independent service provider (ISP) or purchase extractor
- Ultrasonic helmet and self-contained breathing apparatus (SCBA) mask cleaner
- Steam cleaner for hard-to-clean soft surfaces, like cloth apparatus seats

ABOVE: *Steam cleaning is capable of killing bacteria, like MRSA, and other pathogens while thoroughly cleaning surfaces by removing deeply embedded contaminants.*



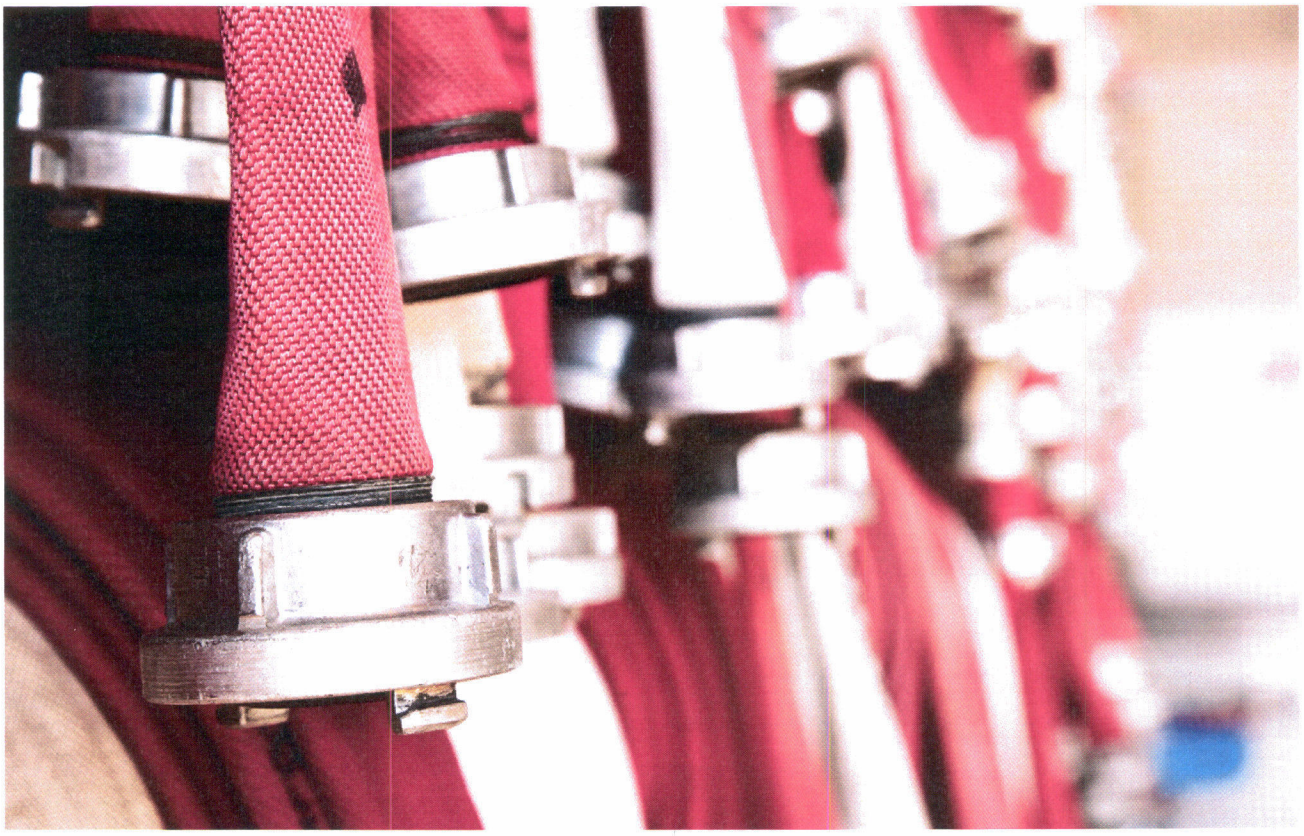
HEALTH AND SAFETY OFFICER

An important aspect of an organizational cancer prevention effort is developing the comprehensive accident, injury, illness and exposure policies and procedures as required by WAC 296-305-01501 and 01503. Such policies and procedures meet the dual needs of managing on-the-job injury processes, as well as providing organizations with data that may prevent future events. In the context of cancer prevention, it is desirable that an organization's policy and culture support precautionary reporting of exposure to carcinogens as a way to identify and mitigate hazards. Similar to near miss reporting, precautionary reporting of exposure to carcinogens allows organizations to identify the root causes of the exposure and to design and implement corrective interventions.

In developing policy that encourages precautionary reporting, it is important to clearly define the parameters of the organization's reporting system. The Washington State Council of Fire Fighters' Personal Injury, Illness and Exposure Reporting System (PIIERS) allows members to record all incidents where there is the potential to have been exposed to the products of combustion. An organizational reporting system, however, should only be used when an exposure actually occurs.

For example, acting as a pump operator upwind of a large commercial fire may warrant a PIIERS report, but may not warrant the filing of an organizational precautionary report. On the other hand, if the wind shifts and the pump operator suddenly finds himself engulfed in acrid smoke, then the member needs to fill out a PIIERS report as well as an internal report. These distinctions are clearly not black and white, and must be supported by good policy along with a culture of mutual trust within an organization.

From Labor's perspective, a robust organizational reporting system may reinforce the organization's commitment to transparency and safety. Labor must also recognize, however, that management may feel exposed to increased scrutiny if every "routine" fire call generated a wave of exposure reports. Because of this, a collaborative effort between Labor and management can be undertaken to clearly define the formal and informal parameters of reporting policy. After all, both groups



have a shared interest: the health and safety of the organization and its members. An additional benefit of maintaining a collaborative approach to precautionary reporting is that it moves training, policy and operational norms towards a culture of safety.

EXPOSURE REPORTING WITHIN FIRE DEPARTMENTS

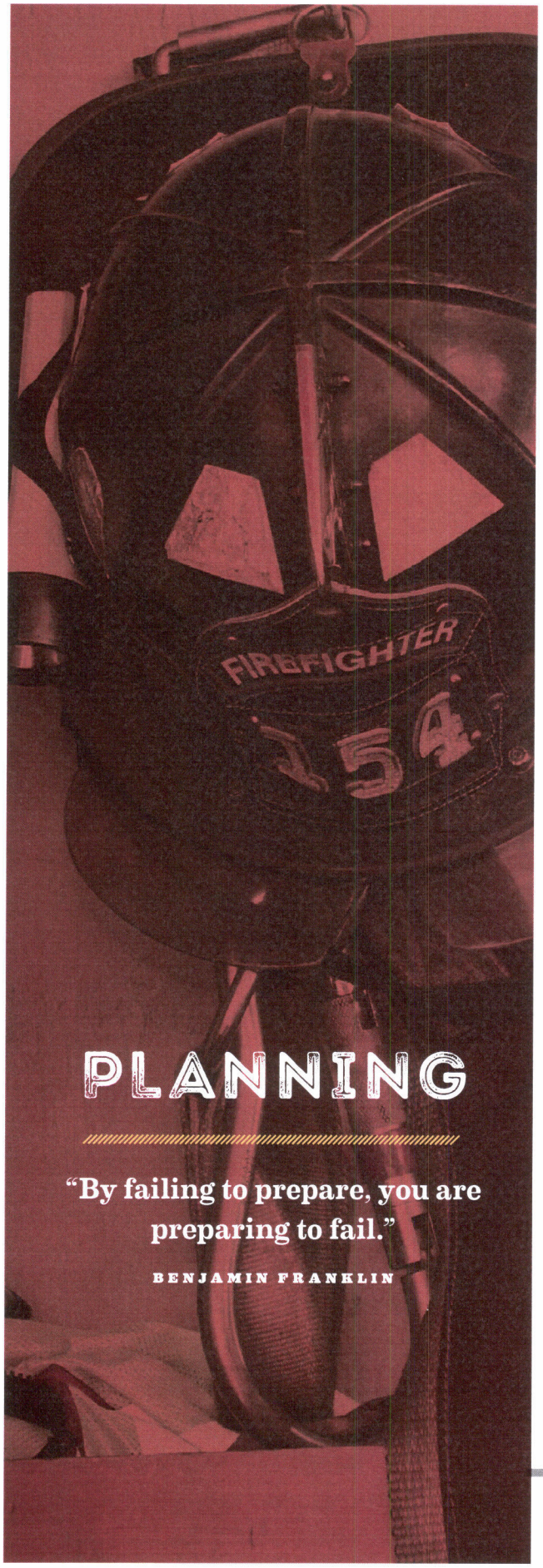
In addition to strong policy, organizations are encouraged to develop strong processes for precautionary reporting. This begins by creating forms and other documents that are logical, accessible and user-friendly. In addition, these forms should not only support ease of use, but should also allow for advantageous data collection by the department. Check boxes, drop down menus and practical narrative prompts are methods that reduce subjectivity and allow for easier retrieval of data.

Exposure report forms should also have clean approval queues that require input from multiple layers within the organization. For example, the pump operator who breathed acrid smoke but did not require immediate medical attention should initiate the report and thoroughly complete all sections related directly to his experience. His company officer would then receive the report and would "proof" the pump operator's work by checking it for completeness and accuracy, and would also provide their own version of events and recommendations to prevent future occurrences. This process should continue through a logical queue that involves all relevant individuals in the affected member's chain of command.

WAC 296-305-01505 requires organizations to develop an accident prevention program. As part of this program, the statute includes language mandating both a safety orientation process as well as the development of a Safety Committee. The final review of a precautionary report should lie with these groups. This policy states that the Safety Committee should be tasked with identifying the root causes of the event and, in doing so; it should suggest action items via the organization's Health and Safety Officer (HSO). These items may include policy, procedural, training and/or operational changes to prevent future occurrences. All Safety Committee and HSO recommendations should be documented, managed and revisited until such a time that the corrective actions are complete.

A confidential document library is the final step for the precautionary report and associated Safety Committee and HSO records. The document library can be accessed should a precautionary report become relevant to an injury or illness that occurs downstream. At this point, both the organization and employee will have a record that the initiating event was reported, reviewed and acted upon.

An additional benefit of maintaining a collaborative approach to precautionary reporting is that it moves training, policy and operational norms towards a culture of safety.



PLANNING

"By failing to prepare, you are preparing to fail."

BENJAMIN FRANKLIN

FIRE STATION DESIGN

When designing a fire station, consideration should be given to finding ways to reduce exposures and prevent the cross-contamination of possible carcinogens and other harmful agents. Existing stations can be retrofitted to best accomplish this where possible.

- Within the station, zones are easily established:

  RED zone: A designated area, as per WAC 296-305-06505, for contaminated equipment including SCBA, EMS equipment from medical calls, fire hose, turnouts, etc., to be cleaned. When cleaning contaminated equipment, always wear appropriate PPE (gloves, splash gown and N95 if appropriate) to protect against exposures from contaminated equipment.

  YELLOW zone: This is typically the apparatus bay. Equipment, cleaned in the red zone, can now be stored in the yellow zone.

  GREEN zone: "Keep it clean in the green." The green zone is the living quarters of the fire station including the kitchen, living, sleeping, personal hygiene and office. Contaminated EMS equipment, turnouts, etc., are never allowed.

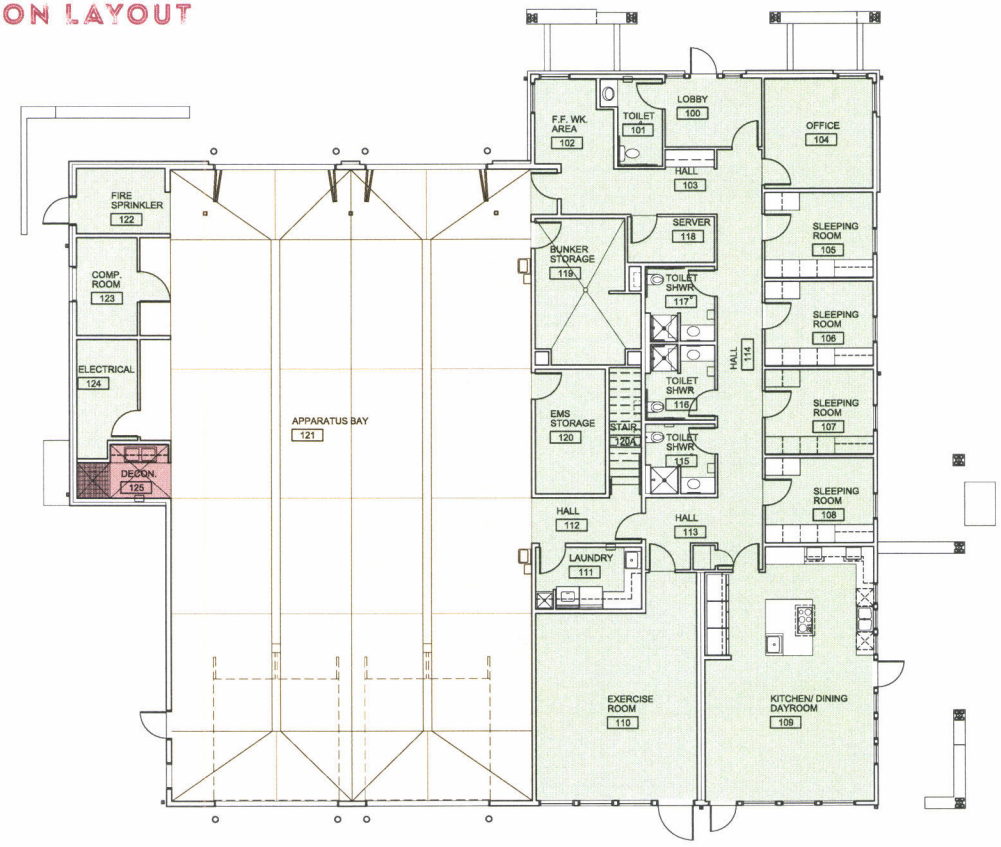
- Direct source capture diesel exhaust handling systems for all vehicles and for every apparatus bay can be included in all new station design and retrofitted into existing stations.

- The air pressure in the living quarters should be higher than that of the apparatus bay to prevent airborne contaminants from entering the living quarters or green zone in general.

- To avoid exposures to UV light, turnout gear storage should be stored in an enclosed ventilated room (NFPA 1851).

- Carpet in fire stations acts like a sponge, collecting dirt, soot, feces, MRSA, staph, blood and OPIM from response footwear worn by fire and EMS personnel. Installing hard surface flooring, such as polished concrete, is one way to mitigate these exposures, as solid surfaces are easier to clean than carpet.

FIRE STATION LAYOUT



- Similarly, furniture and fixtures in fire stations attract and collect dirt and biological toxins. A 2011 study by the University of Washington Field Research and Consultation Group found MRSA on chairs, phones, computers and kitchen counters in fire stations in western Washington. This study shows the importance of keeping frequently touched items clean and disinfected.
- For new fire station design, plan adequate space requirements for turnout cleaning extractors to clean turnouts in-house, or provide an area to package turnouts at the station prior to shipping to an Independent Service Provider (ISP) for third party cleaning. Follow manufacturer's instructions on methods for cleaning turnouts.

FACILITIES MAINTENANCE

Initial and/or periodic testing should be conducted at fire stations to ensure a safe environment for fire and EMS personnel working in those stations.

- **Diesel exhaust:** Engineered systems such as direct source capture systems need to be maintained to ensure they are exhausting the gasses and particulate matter to the outside atmosphere. Diesel exhaust is classified by the International Agency for Research on Cancer (IARC) as carcinogenic to humans (Group 1).
- **Staph, VRE, C Diff and MRSA:** Chronic health effects from bloodborne exposures that are persistent in the fire service.
- **Asbestos**: Older fire stations should be assessed for asbestos encapsulated pipe wrap. If the wrap is damaged, it needs to be repaired or replaced.
- **Radon:** A radioactive gas that occurs naturally in the ground. It can enter into living spaces—especially basements, through ground water or cracks in foundations—and congregate there. It is known to cause lung cancer. If found above EPA guidelines, mitigation options should be considered.

Diesel exhaust is classified by the International Agency for Research on Cancer (IARC) as carcinogenic to humans (Group 1).

STATION SHOES VS. WORK BOOTS

Fire and EMS personnel regularly respond to incidents in which exposures to biologics and carcinogens can occur. It is not uncommon for personnel to step in hazardous substances (e.g., soot, blood, urine, vomitus, feces, etc.) with their response footwear during a call.

- To further reduce contamination that may be brought into the stations on the soles of response footwear, an alternate form of footwear (the station shoe) is authorized for wear inside the stations. An example of a station shoe could be black in color, closed-toed and a non-safety shoe that is easy to clean if needed.
- The station shoe can be changed into and out of quickly without delaying response to a call.
- Station shoes shall not be worn while performing apparatus checks, while responding to calls or when performing work where safety shoes (impact and crush protection) are required.

Carpet in fire stations acts like a sponge—installing hard surface flooring, such as polished concrete, is one way to mitigate these exposures.

APPARATUS DESIGN

Apparatus can be designed with careful thought given to biological and chemical contamination and the potential for cross-contamination. The cab of the apparatus should be kept free of toxins, both in the hard and soft surfaces as well as in the air.

- SCBAs and turnouts should have their own compartment away from the cab. SCBAs that are designed into the seat should also come with provisions for decontamination and cleaning prior to placing back into the seat after a fire.
- All seat material should be of vinyl or other material to reduce absorption of toxins and for an easy clean.
- Apparatus can be adapted to have a warm water outlet, which provides a personal washing station. Prior to 2016, NFPA 1901 required a heat exchanger for the engine coolant, most apparatus manufacturers accomplish this with water from the tank through a heat exchanger. A simple diverter valve to the pump panel can create a warm water outlet for a personal hand washing station.
- All flooring can be designed with a waterproof material that can be washed with a hose and scrubbed out.
- Exhaust pipes can be designed to exit where fire fighters are least affected when opening cabinets and accessing pump panel controls.
- Pre-packaged water bottles carried on apparatus for personnel to rehydrate are a handy solution. A reusable water cooler container can be safely utilized, provided a timely cleaning and disinfecting plan is in place.
- All interior material used in the cab should be easily cleaned and designed to repel moisture. They must also be durable

ABOVE: *SCBAs and turnouts should have their own compartment away from the cab.*

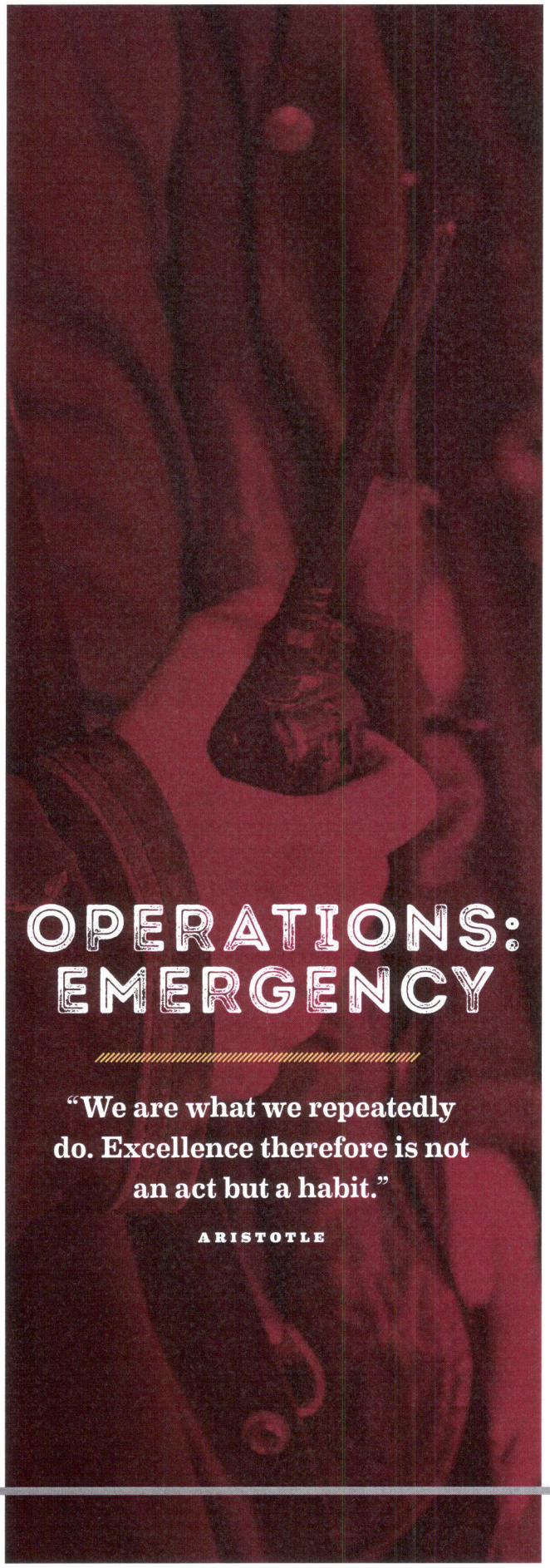
enough to be cleaned weekly with disinfecting agents, soap and water. Do not use cloth for the apparatus seat materials.

- Contaminated equipment (SCBAs, fire hose, TICs, etc.) should not allowed in the cab of the apparatus until the equipment has been properly decontaminated. This may involve arranging transportation for the contaminated equipment from the incident to the fire station for proper for decontamination.
- As a **best practice**, groceries should not be routinely transported in fire department apparatus due to potential cross-contamination. Because this is a common practice while working 24-hour shifts, a designated cooler or insulated zippered container can be used to minimize cross-contamination.

APPARATUS TURNOUT STORAGE

- All apparatus should have a designated turnout compartment that is separate from the cab.
- Turnouts should not be routinely allowed in the cab of the apparatus with the exception of responding to emergencies or participating in trainings.
- No contaminated turnouts should be allowed in any apparatus cab.
- After an incident or training that involves contaminants, all turnouts should be grossly decontaminated on scene, encapsulated in a designated disposable bag and be transported to a fire station for proper cleaning.

Apparatus can be designed with careful thought given to biological and chemical contamination and the potential for cross-contamination



OPERATIONS: EMERGENCY

"We are what we repeatedly do. Excellence therefore is not an act but a habit."

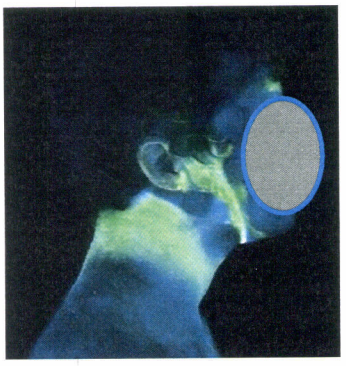
ARISTOTLE

Conduct a risk/benefit analysis that takes into consideration the risk of fire fighters being unnecessarily exposed to carcinogens. Limit toxic exposures to personnel on scene. Incident Commanders (IC) can cancel units who are not needed.

- Upon arrival at the incident, units should stage uphill and upwind to the fire when practical. Keep apparatus windows closed, air conditioner and heat turned off to minimize airborne contaminants from entering the cab and contaminating the interior.
- If the apparatus is not involved in an integral process of fireground operations (pumping, supplying or aerial operations), turn off the motor to reduce the diesel exhaust on the scene.
- On-deck and Rapid Intervention Crews (RIC) can be readily available without standing in the smoke. Stay outside of the smoke envelope—the area surrounding the scene where airborne contaminants are present—and be aware of the greater picture. This envelope depends on atmospheric conditions. For example, on low wind days with atmospheric inversion, the smoke envelope may surround a fire scene with a large spread of emissions in all directions.
- Responders should wear appropriate PPE whenever the situation warrants, including the pump operator/engineer and IC, and may have to wear SCBA whenever exposed to the products of combustion or hazardous materials.
- All personnel engaged in fire fighting shall utilize SCBA from initial attack throughout overhaul. FCSN 2011 states that not wearing SCBA is the "single most dangerous voluntary activity" in today's fire service. Such usage should include not only interior structural fire fighting, but also for car fires and dumpster fires.

GROSS DECONTAMINATION (DECON)

- Prior to removing fire fighting ensembles worn in the hot zone, a gross decontamination shall be performed to remove potentially harmful contaminants (WAC 296-305-05002 (15)).
  - **Wet Decon:** Members should brush large debris first, and then spray each other with water to remove loose particulates from turnouts and equipment. Utilizing the pump operator for decontamination should not be allowed due to their lack of respiratory protection. The designated Gross Decon line should be deployed approximately 50 feet from the pump panel, towards the egress of the IDLH and designated by a cone. Do not connect decontamination line to a foam discharge port during foam operations.
  - **Dry Decon:** During cold weather operations, dry brushing should be conducted to remove the toxic products of combustions from the fire fighters prior to going off air and removing SCBA face pieces.
- All fire fighters engaged in suppression activities, overhaul or exposure to smoke should exchange their contaminated



LEFT: *RTI conducted a fluorescent aerosol test that found aerosol particles can penetrate a firefighter's hood and deposit on the skin. There were very heavy aerosol deposits on the neck, cheeks, ears, and hair due to penetration through the hood. The dark bands below the ears were relatively clean areas that were covered by the mask straps.*

Test conducted by: RTI International, Research Triangle Park, NC sponsored by the International Association of Fire Fighters.

hood for a clean one every time they exit the IDLH. Replacement hoods should be readily available on scene.

- After Gross Decon and before eating or drinking, a personal hand washing station, including hand soap and towels, will be set up. In lieu of soap and water, utilize disposable wipes for hands, face and neck. Personnel should wash their hands before Rehab, at the end of suppression activities including overhaul and before returning to the living quarters. The hand wash station or wipes should be available at the entry point to Rehab.
- When released from the incident, fire fighters need to bag their contaminated turnouts in large, encapsulating leak-proof bags for transport back to the station. Wearing contaminated turnouts back to the fire station will transfer contaminants to apparatus seats, resulting in exposure to the next member who sits there due to cross-contamination.
- To protect hands from dermal absorption of contaminants while packaging turnouts, wear a minimum of EMS latex or nitrile gloves. Personnel must shower upon returning to quarters, or as soon as practical. Keep a reserve set of turnouts at assigned stations. Clean contaminated turnouts, including hood, gloves, boots and helmets in accordance with NFPA 1851; or send them out to designated station or an ISP for cleaning.
- When cleaning contaminated equipment, always wear appropriate PPE (gloves, splash gown and N95 if equipment is dry and particles could become airborne) to protect against exposures from contaminated equipment (WAC 296.62).

INCIDENT REHABILITATION (REHAB)

Provide rehabilitation and medical monitoring to establish the mental and physical condition of personnel participating in tactical operations and training at the scene. Carcinogens can be absorbed, inhaled and ingested on a fire scene. Proper decontamination and rehabilitation procedures reduce exposures to carcinogens during these critical times.

- Rehab must be located in a place that allows enough space and protection from adverse environmental conditions including fire, smoke, exhaust, extreme heat and cold. An ideal location would be out of direct sight of the working incident, with room for separate areas to remove PPE, a rest and evaluation area, a treatment area and access to a restroom when possible.

INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) CONTAMINANTS & CLASSIFICATIONS

CONTAMINANT	NOTE
Acetaldehyde	IARC Group 2B carcinogens
Acrolein	IARC Group 3 carcinogens
Aniline	IARC Group 3 carcinogens
Antimony compounds	Toxicity similar to arsenic poisoning
Arsenic	IARC Group 1 Carcinogens, endocrine disruptor
Benzene	ARC Group 1 Carcinogens
Beryllium compounds	IARC Group 1 Carcinogens
1,3-Butadiene	IARC Group 2A carcinogens
Cadmium	IARC Group 1 Carcinogens, endocrine disruptor
Dibutyl phthalate	Endocrine disruptor
1,8-dinitropyrene	Sufficient evidence in experimental animals
Dioxins and dibenzofurans	Are suspected human carcinogens
Formaldehyde	IARC Group 1 Carcinogens
Mercury compounds	IARC Group 3 carcinogens
Naphthalene	IARC Group 2B carcinogens
Nickel	IARC Group 2B carcinogens
3-Nitrobenzanthrone	One of the strongest carcinogens known
Benzo(e)pyrene	IARC group 3 carcinogens
Benzo(a)pyrene	IARC Group 1 carcinogen
Styrene	IARC Group 2B carcinogens
Toluene	IARC Group 3 carcinogens
Xylene isomers and mixtures: o-ylenes, m-xylenes, p-xylenes	IARC Group 3 carcinogens

- Personnel are to rotate through Rehab after IDLH work period of 2/30s or 1/45-minute SCBA cylinder or anytime the environment, workload and/or atmospheric conditions indicate the probability of injury or temperature related illness to personnel. This includes, but is not limited to, working fires and haz mat incidents when encapsulating suits are worn.
- At the entry point prior to entering Rehab, fire fighters are to use a personal hand washing station with water, hand soap and towels. In lieu of soap and water, utilize disposable wipes for hands, face and neck.
- An evaluation will occur each time a fire fighter enters Rehab to include the following: time, name, unit, mental status, any symptoms such as chief complaint, shortness of breath, poor gait, confusion, dizziness, nausea or vomiting, cramps, aches and pains. All symptoms will be thoroughly evaluated by the appropriate EMS level of care.
- Personnel not in the IDLH but within the hazard zone (pump operators, IC, etc.) should be observed and periodically monitored for potential exposure to toxic gasses and/or heat and cold stress.
- In warm weather, removal of turnout gear is necessary in order to allow the body's temperature regulating mechanism to function properly. The duration of the ventilation process will depend on the workload and atmospheric air temperatures.
- The use of tarps for shade and electric fans to provide airflow may be necessary during hot weather, and other appropriate shelter should be utilized during inclement weather.
- Fluid replacement is necessary in order to maintain the high metabolic demand placed on fire fighters during emergency operations. It is recommended that members drink one liter of water per hour in order to replace fluids lost due to dehydration. After one hour, electrolyte additives should be added to the water source (NFPA 1584).
- Caffeinated beverages and "energy drinks" should be avoided during the emergency incident due to their diuretic effect.

Accumulation of soot and chemicals on turnouts can lead to persistent exposures of carcinogens to fire fighters. Turnouts should then be cleaned after each exposure to toxic products of combustions.

OVERHAUL

The primary emphasis during post-fire operations should be the safety of all fire personnel operating on the scene. Decontamination, rehabilitation and rehydration procedures should already be in place. When crews are able to exit the structure as soon as reasonably possible, they allow for the chemicals to dissipate naturally and their overall exposure will be reduced. An additional benefit of timely crew removal is that it will allow Fire Investigators to gather information before a scene is further disturbed by overhaul.

As a **best practice**, the most contaminated crews should be sent home first for showers and change of clothing to remove the toxic products of combustion that accumulate on fire fighters during fire fighting operations. The Jacksonville (Florida) Fire and Rescue Department (JFRD) has had a policy in place since 2010 (SOG 437) that designates a new crew be dispatched to the scene of working fires as a CUT Team. An acronym for "Clean Up Team," the primary job of CUT is to "perform overhaul duties and assist the Fire Investigator at structure fires." This allows the original fire fighting crews to return to quarters and clean up after their fire fighting operations.

- During the structural cooling off period, the IC can develop an overhaul plan that includes the identification of safety issues like holes in floors or unstable walls/roofs and the establishment of hot, warm and cold zones.
- SCBA is mandatory to be used for any work performed inside the structure for duration of overhaul. Monitor for fatigue, hydrate and cool crews.
- Fire investigators can begin interviews and investigation outside the structure during the structural cooling off period.
- Fire investigators are subject to the same toxic environments as other fire fighting personnel. They must be protected from respiratory and dermal absorption hazards when operating inside the hot zone (WAC 296-305-05002 (16)).

continued on page 16

COMMUNITY ACTIVIST:

ADAM VILLARD PREACHES BETTER PRACTICES

BY ERIN JAMES

I was that guy in the department who had the dirtiest helmet, the dirtiest gear and I was proud of it," says Adam Villard, union president and Fire Fighter EMT for Spokane County Fire District 8.

Villard admits he wore his ash-clad gear until he was instructed to clean it by his chief. However, in 2012, he went to a class hosted by the Firefighter Cancer Support Network and heard Washington State network director Eric Monroe speak about dirty gear and absorption through the skin. "He spoke about how if you don't shower and clean yourself after a fire, that exposure is in your system for a longer period of time," Villard says. "He opened my eyes—opened them enough to change my ways. I went back to the station and cleaned my gear and thought to myself that I might have dodged a bullet."

With a history of kidney stones and a specialist he visited regularly, Villard went in for a somewhat routine ultrasound shortly after he attended the cancer support class. His doctor found a mass on his left kidney and planned for him to monitor it on an annual basis. A few months after that first one-year mark, Villard developed another kidney stone and went to see his specialist who recommended doing an MRI. The mass was later diagnosed as left renal cell carcinoma. In May of 2014, Villard had the upper back slope of his left kidney removed, totaling as a third of the organ.

"The doctor says this would have gone asymptomatic for years but when they become symptomatic, we got real problems," Villard says. "I started doing research and all the guys from on the job that passed away from kidney cancer were 46- or 47-years-old, which would have put me right in that range."

Villard brought his investigation to his doctor and asked if he thought it was a result of his job. "He said he didn't have enough research but that it was probable and I was awfully young to get this," Villard remembers. "I said that was kind of my point."

He showed the specialist the RCW presumptive cancer list and the science backing from IAFF resident oncologists specifically on carcinogens and kidney cancer. "He read it and filled out the paperwork saying it was more probable than not that the job causes cancer," he says.

For a small department like his, Villard's diagnosis had a colossal impact on the practices in place—so much that policy changes were made and the department purchased additional turnout extractors to clean gear properly at all four stations.

"They are doing the best they can to limit the problem," Villard says. "I think the industry is coming around more and more as more tragic events and diagnoses take place. It's opening a lot of people's eyes."

Villard predicts a major culture shift that leans more toward cleanliness and safety than the "tough guy mantra."

"I'm a ten-year fire fighter, we're right in the middle of Gen X and we have a certain mindset," he says, tongue-in-cheek. "I think that mindset is starting to change. With this manual coming out, most of this class of the fire service is going to be open to the change."

Outspoken and active, Villard says he is not shy about discussing his own trials and tribulations with cancer as a fire fighter and regularly speaks to new recruit classes in his district.

"I want folks to know that I was the guy who kind of had a bad attitude about it but someone changed my mind, but at that time, I had already gotten sick," he says. "I'm just trying to prevent someone else from having the blinders on."

TRANSPORTING CONTAMINATED EQUIPMENT

Contaminated equipment, turnouts and hose should be transported back to the fire station in a manner, designed to reduce cross-contamination.

- Gear should be encapsulated utilizing a single-use, heavy-duty plastic bag. The bag should be of sufficient size (42-gallon) and strength (2-3 mil) to contain all contaminated gear, including turnouts, helmet, mask, gloves and boots.
- The encapsulated gear should be placed outside of the passenger compartment, in an external compartment. Transport gear in a similar manner to a facility with an extractor or to an ISP.
- Upon arrival back at fire station, and prior to personnel taking showers, open the turnout bag and let the turnouts off-gas outside the fire station. After showering and changing to a clean uniform, remove any tools from turnouts and launder in extractor or repackage for transport to designated cleaning station or ISP.
- Transporting contaminated equipment, hose and turnouts in the bed of a utility pickup will not need to be encapsulated. Be sure to wear appropriate PPE when handling contaminated equipment and clean the transport vehicle after use.

CLEANING TURNOUTS

Gross Decon happens at the fire scene first. Turnouts should then be cleaned after each exposure to toxic products of combustions. Exposures can be from car fires, dumpster fires, structure fires and training burns. Accumulation of soot and chemicals on turnouts can lead to persistent exposures of carcinogens to fire fighters. Structural turnouts, including gloves, helmet, hood, boots, pant and coat, should be cleaned according to manufacturer's recommendation and NFPA 1851.

BELOW: *Bagging up contaminated turnouts and SCBAs prevents cross-contamination.*

IMMEDIATE ACTION: JEFF GREENE'S ROAD TO RECOVERY

BY ERIN JAMES

The great outdoors have always spoken to Jeff Greene. Growing up in Lake Stevens, Washington and moving to Wenatchee later in his childhood, he found his calling in the open air and fire fighting seemed the perfect fit for a career. He is an avid fisherman and hunter, has worked in departments throughout the Pacific Northwest and spent eight years on the haz mat team in an industrial area of Kent.

In December of 2014, at the prime age of 32, Greene was diagnosed with chromophobe renal cell carcinoma. A rare sub-type of the greater renal cell carcinoma umbrella, Greene's type of cancer holds up just 5 percent of all kidney cancers and only seen in 60 cases a year on average.

After waking up with a side pain he soothed with a heating pad six months prior, the second occurrence of the pain was too much to bear and Greene's wife insisted he visit his primary care doctor. Several screenings and tests later, his doctor determined there was a spot on his kidney that was renal cell carcinoma, but it was weeks out until he was able to see a specialist.

"When I got the news, I was sitting at work and called Seattle Cancer Care, told them my story and asked if I could come in," Greene says, noting he was in their hospital just three days later. "I met with a surgeon there, he looked at my file and said that it really didn't matter at this point what it was. That at my age, it's going to grow to a point that it's going to be in the way, whether that's just a tumor or cancer. We had to cut it out."

This type of cancer forms in the cells lining the small tubules that help filter waste from the blood and produce urine in the kidney—and the only treatment is surgery. Thankfully for Greene, the procedure was simple; the affected portion was cut out and he quickly returned to the world he loved.

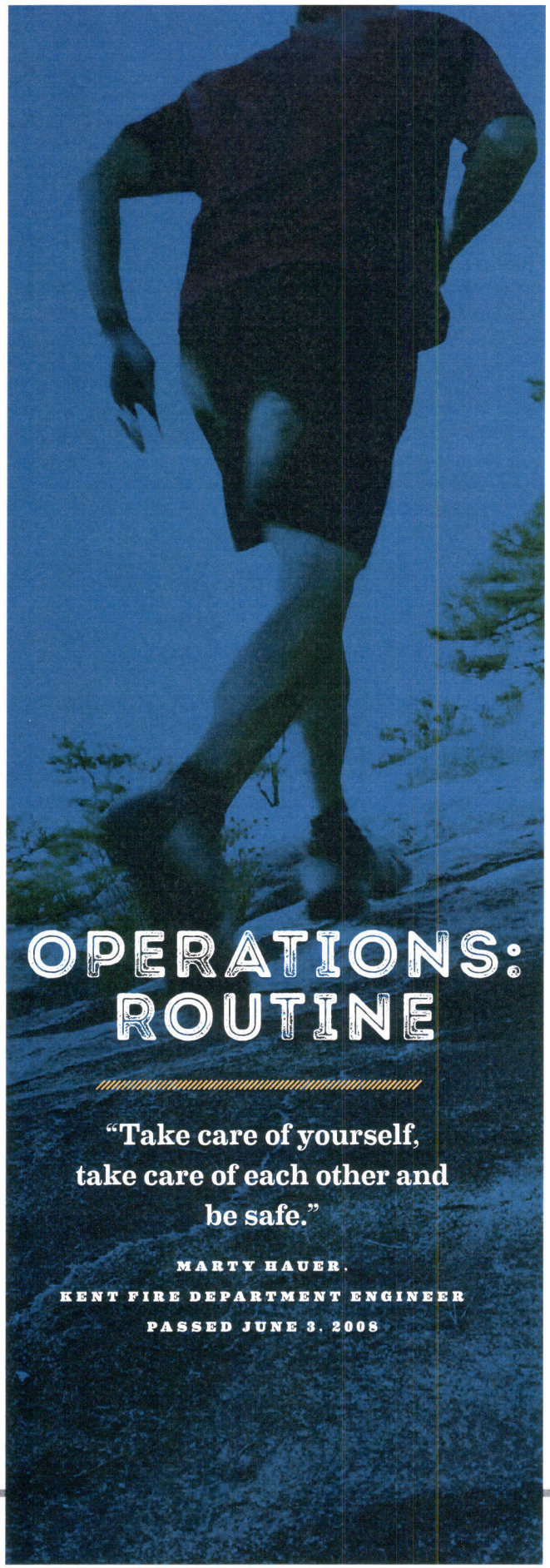
Unlike many other fire fighters who battle cancer, Greene, who is an Engineer/driver for the Kent Fire Department, always had his best practices dialed in. He says he can only recall a singular, yet distinctive, time when his safety might have been in jeopardy.

"When I was on probation my very first year, we went to a pipeline fire and we were breathing the fumes with raw fuel spraying everywhere," he says. "One of the possible causes of kidney cancers is benzenes (a natural part of crude oil and gasoline)... We were only 100-200 feet away from the active fuel, we were breathing fumes the entire time. It wasn't until hours later when they realized the potential of it and moved everybody back."

With a heightened sense of consciousness, Greene encourages his fellow fire fighters to be aware of everything they do on the job. "Don't bring that home to your kids, you don't want carcinogens at home," he says. "If you can smell it, you know carcinogens are all over everything."

Today, Greene is behind the fire service's movement toward cancer awareness. He says he understands it might take time for change to be reinforced, but for now, he shares his story to help better practices sink in on a personal level.

"As long as we are getting this data and information out there, maybe there will be more looked into as far as finding a definitive cause," Greene says. "If it's something that we are doing—at the station or on calls—that's causing it, it'd be nice to know so that somebody else doesn't have to go through with this."


OPERATIONS:
ROUTINE
"Take care of yourself, take care of each other and be safe."
MARTY HAUER,
KENT FIRE DEPARTMENT ENGINEER
PASSED JUNE 3, 2008

WELLNESS COMPONENT

How the body performs is the best indicator of what is going on inside of it. If it doesn't feel right, it might not be. It is encouraged that all fire fighters listen to their bodies and get checked at the first signs of abnormal issues and symptoms.

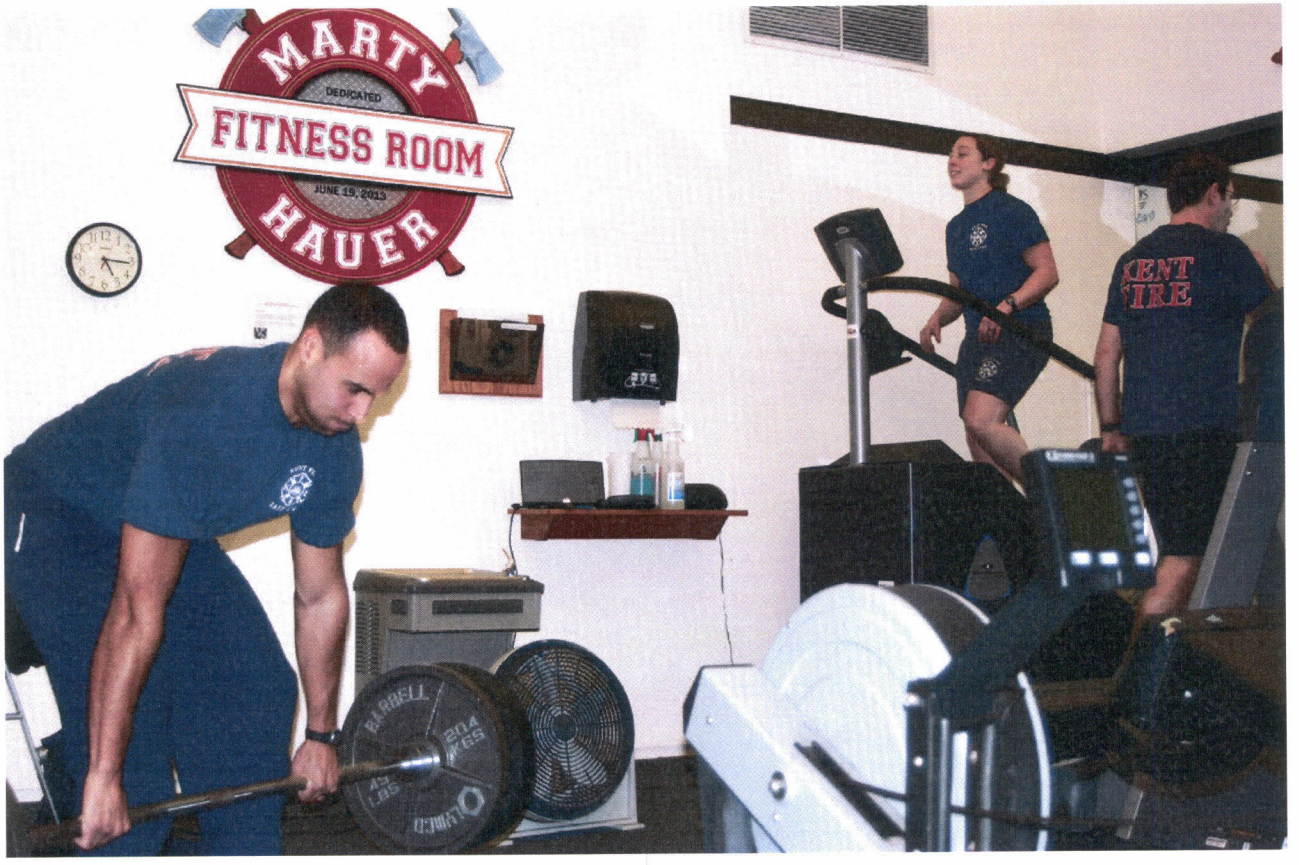
There are many important components to help the body stay cancer-free in the fire service. A key step is to never start using tobacco products, of any kind. If a member occasionally smokes cigarettes, e-cigs, cigars or dips smokeless tobacco, it is encouraged they stop immediately. Regular use of a sunscreen or sunblock can help protect from skin cancer. General wellness can be achieved by regular exercise, a healthy diet and, most of all, awareness of what is going on in the body.

Physical fitness is extremely important as a fire fighter. Being physically fit can prevent or reduce injury, increase performance, increase career longevity and help improve one's quality of retirement. There is a physical fitness standard that must be reached when someone initially joins the fire service, but fitness throughout one's career is just as important.

Research has demonstrated the need for high levels of aerobic fitness, muscular endurance, muscular strength, muscular power and flexibility in order to perform safely and effectively in the fire service. The activities required while performing work on the fireground are physically demanding and can put stress on the heart. Heart attacks are one of the leading causes of fire fighter fatalities. Healthier, physically fit and conditioned fire fighters will lead to fewer injuries and improved performance on the fireground. Staying in shape and working out throughout one's tenure will also lead to a healthier life after retirement and allow the retiree to have a higher quality of life during their retirement years. Working out while on shift also provides camaraderie within a crew and station.

Sleep habits are another consideration for fire fighters. This chosen profession often makes regular sleeping habits difficult or impossible. Long shifts of 24 or 48 hours contribute to irregular sleep habits, which have been shown to have a negative impact on health. As recommended by the National Institute of Occupational Safety and Health (NIOSH), fire fighters should focus on getting plenty of rest while off-duty, rather than exacerbating potential health hazards by going without sleep or limiting the opportunity to get adequate rest when available.

According to the Center for Disease Control, **alcohol** is a leading cause, as well as a contributing factor, to many forms of cancer. Over time, excessive alcohol use can lead to the development of chronic diseases and other serious problems including high blood pressure, heart disease, stroke, liver disease, digestive problems and cancers of the breast, mouth, throat, esophagus, liver and colon. Limit alcohol consumption to not more than one drink per day for women, two drinks per day for men.

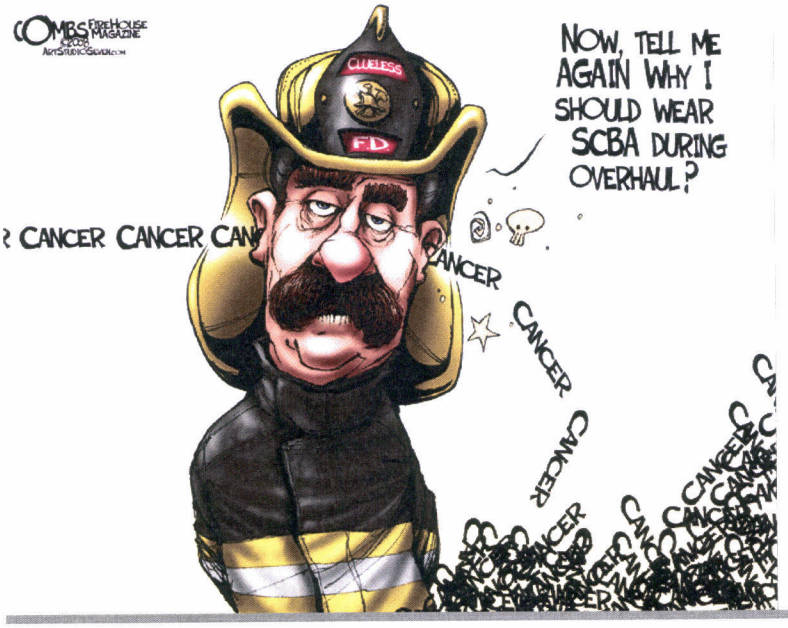


ABOVE: *Research shows that aerobic fitness and muscular strength and endurance help members to perform safely and effectively in the fire service.*

ANNUAL PHYSICALS

Fire fighters enter toxic atmospheres, perform strenuous physical activities and do so over an expansive 20-30 year career. WAC 296-842 mandates respiratory protection if a member is entering an atmosphere with toxic products of combustion. WAC 296-842-14005 requires a medical evaluation prior to being fitted for respiratory protection. WAC 296-62-07314 also requires a medical exam for any employee prior to being assigned to work in an area that may release carcinogens. For fire fighters, members often enter unknown carcinogenic environments including structure fires, car fires or dumpster fires. These exams are to be provided at no cost to the employee and provided annually after an initial examination.

A sample recommendation of an annual physical provided by the Firefighter Cancer Support Network (FCSN) is included in Appendix C. The IAFF/IAFC Joint Wellness Fitness Initiative (WFI) also provides an annual recommended physical for incumbent fire fighters. Specific tests such as red and white blood cell count tests, heavy metals screenings and cancer screenings can assist with early detection of many common cancers seen in the fire service today. These simple exams can determine if cancer is a risk, as well as if it is present. Having this annual exam is imperative to early detection and aggressive action to address any problems.



THE LIFESAVING PHYSICAL: HOW FAMILY MAN CHRIS LINES SURVIVES MULTIPLE MYELOMA

BY ERIN JAMES

In the 20th year of Chris Lines' fire fighting tenure, he was diagnosed with multiple myeloma, a rare and incurable blood cancer. Myeloma makes up just 1 percent of cancers, but it is the second most prevalent blood cancer after lymphoma. According to multiple studies, it is 1.5 times more likely a fire fighter will develop multiple myeloma compared to the general population.

Multiple myeloma begins when plasma cells, white blood cells found in bone morrow, mutate and start to reproduce themselves. According to Lines' doctor who handed the now 52-year-old the diagnosis eight years ago, his line of work caused his cancer.

"I got a call from the doctor and he said I was anemic and my red blood cells were low," Lines says. "I did a blood test and a bone marrow biopsy and they gave me the big diagnosis. They caught it real early, not early enough to cure, but before it caused really any damage to the bones or organs or anything."

The Vancouver Fire Department requires its members to take annual wellness tests—a requirement that saved Lines' life. He says if his doctor hadn't done the extra tests after the red flags rose from his physical, he wouldn't have known until it was too late to even medicate. The immediate solution was for a stem cell transplant, modern medicine's "golden ticket" for putting cancer into remission and keeping it at bay for a few years.

"The kind I have always comes back, it never goes away forever," the Battalion Chief explains. "When they offered the transplant to me, I had a nine-year-old boy getting ready to play All-Star little league—I wasn't going to go into the hospital for a couple weeks and be out of commission for four months. I said I wasn't going to do the transplant, I'll take all the stem cells out and freeze them and watch this kid play baseball."

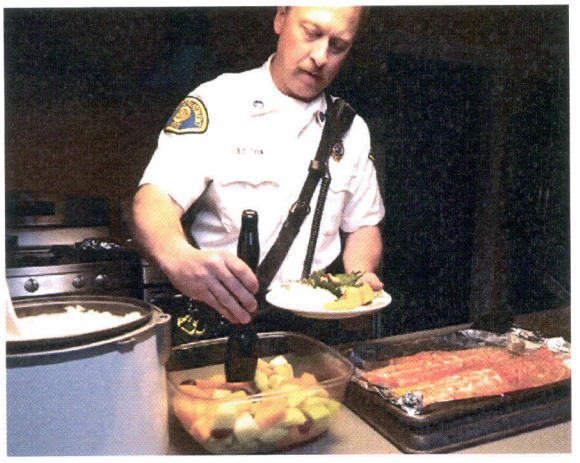
Considering himself lucky, Lines' treatment consists of 14 pills per month that have helped him to continue on with his life, without pulling him away from his family or his passion in the fire service. Today, he uses that fervor to tell his story and encourage better practices in the field.

"I tell the guys at work all the time the best thing that can happen to you is to pull in the driveway in the morning and have two little screaming kids come out and give you a big hug," says the father of two teenage boys, the eldest currently enrolled in fire school. "You guys want to make sure you get to that in life and don't jeopardize your future by doing anything crazy in the fire service or the same thing with taking care of yourself."

Steadfast to the rules of better practices, Lines says he never took any risks when it came to his time on calls, but recognizes that his education of carcinogen exposure was limited prior to his diagnosis. He strives to change that mindset as younger fire fighter classes come on board, encouraging them to take care of themselves and for his own generation to adapt to new safety precautions.

"I think the fire service has really taken a positive role in getting their members tested, buying some of the best practices available," Lines says. "Fire fighting is always going to be dangerous because of the chemicals you're involved with. After talking to some experts, you don't know how bad you're exposed to something until 20 years down the road. If you can do what you can do in the mean time, then I think that's a huge benefit and I do think that's happening now in the fire service."

His advice to fire fighters on carcinogen exposure? Check yourself constantly. "If you're in a fire, take the time, not just for you but for your family, to do all the best practices even if you're tired," Lines says. "But if I could give any kind of encouragement, it is to continually get a physical every year. Make sure you do it."



BASIC NUTRITION

Diet is a primary consideration. It is the responsibility of every member to try to follow a diet that helps minimize a cancer-related occurrence. The best nutrition for the body is to eat as many whole foods as possible for each meal. Whole foods naturally provide necessary vitamins, minerals and other nutrients that are vital to keeping the human body healthy and free of disease. Processed foods, on the other hand, tend to have fewer nutrients and more unhealthy fats, sugars and other additives, which can increase the risk for diseases such as diabetes, heart disease and certain types of cancer. The cleaner the diet, the better the body will run and the immune system will be more effective when it has to deal with viruses, bacteria and other toxic exposures.

Most fire fighters get adequate amounts of proteins and grains but tend to lack vegetables. Vegetables help the body process food and should be eaten prior to the bulk of your meal, such as having a salad before dinner. When presented with an opportunity to select vegetables, choose a variety of colors, as each different colored vegetable provides a different health benefit when consumed.

Most nutritionists will tell you to eat three meals a day (breakfast, lunch and dinner) with two to three snacks in between the larger meals and avoid eating past the hour of 8 p.m. In the fire service, this can be difficult, if not impossible, due to the erratic schedule, and the use of food as a comfort to a high stress job.

In general, it is advised to eat a large breakfast and start off the day well nourished, and then as the day unfolds, try to hold to the ideal of lunch around noon and dinner around 6 or 7 p.m. When snacking, try to pick a low sugar snack, especially the closer it is to the sleeping hours. Caffeinated beverages, especially energy drinks, and a high sugar diet at night will increase the inability to fall asleep, coupled with calls, this can lead to severe sleep deprivation.

Lastly, getting 64-88 ounces of water per day helps the body process and move food/fuel through the digestive system, and has a huge impact on nutrition overall. A good rule is to drink a glass of water prior to each meal, prior to training and after any call that requires physical exertion or the donning of bunker gear.

TRAINING: CANCER AWARENESS

Training, education and recognition of the epidemic of cancer in the fire service has been a goal of the Firefighter Cancer Support Network for many years. It is imperative that new generations of fire fighters are made aware of how large and impactful this problem is. The following is a list of the highlights that are taught during these cancer awareness outreach classes. This curriculum should be taught at every recruit school, and annually at every fire department. WAC 296.62 also requires an awareness of the hazards of carcinogens on the job and annual refresher training is required prior to entering any live fire training scenario or actual fire scenario.

- Carcinogenic hazards of chemicals encountered on the fireground including local and systemic toxicity.
- Benefits of personal wellness efforts including exercise, nutrition and annual physicals.
- The most common types of cancer in the fire service that fire fighters are more likely to develop than the general population: multiple myeloma, non-Hodgkin's lymphoma, esophageal cancer, brain cancer, colon cancer, prostate cancer, skin cancer and testicular cancer.
- Supporting research and findings demonstrating the scope of cancer in the fire service.
- Laws and standards applicable in the specific state and jurisdiction regarding cancer in the fire service.
- Common materials that pose a risk to fire fighters.
- Methods of reducing exposures to carcinogens at incident scenes.
- Benefits of Gross Decontamination, such as hand, face and neck washing on scene.
- Methods for cleaning turnouts and self after an incident.
- Methods of documentation of exposures after an incident.
- Education on exposures and cancer risks before any training or incidents that have the potential to expose fire fighters to known carcinogens, asphyxiates, poisons, irritants and allergens.
- Provision of all appropriate PPE to minimize exposures.
- Requirements to use all appropriate PPE to minimize exposures.
- All staff that participates in the training of fire fighters should conform to the practices listed in this document.

DOCUMENTING EXPOSURES FOR INDIVIDUALS

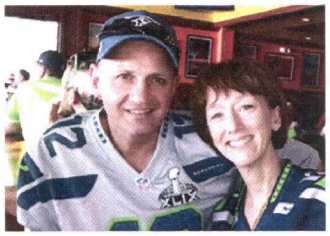
It's no secret this profession puts its members in environments filled with known and unknown chemicals, carcinogens, toxins and diseases. As a result, it has been proven that fire fighters are more prone to certain illnesses and cancers than the general population.

At Convention in 2014, the WSCFF passed a resolution to create an exposure tracking system for its membership. The Personal Injury, Illness and Exposure Reporting System (PIIERS) was created and is designed to follow fire fighters throughout their career and into retirement. It is a one-stop place to record injuries, illnesses and exposures experienced while on the job. Confidentiality of information will always be safeguarded, only the user will have access to personal information.

PIIERS is a one-stop place to record injuries, illnesses and exposures experienced while on the job.

As a PIIERS user, one can track their exposures to chemicals, smoke, toxins and diseases throughout their career. The system can be used to track work-related injury claim information such as sprains, strains and broken bones, along with illnesses such as any cardiac events. Users have access to the results of preventative and wellness exams into the PIIERS program as part of a complete health history. Before annual physicals, users can download a report including current exposures to share with their doctor. PIIERS may show changes over time, and throughout a career.

For the WSCFF, PIIERS provides the ability to run reports on non-protected and generic information to track trends and to develop health education or prevention materials. PIIERS can also be used for legislative and safe work-place initiatives.



ALL IN THE FAMILY: JACK WALLER'S FIRE SERVICE SUPPORT SYSTEM

BY ERIN JAMES

"Brotherhood" is a term that pulls its weight in the fire service. Among shifts, pushing throughout the station, into the department and out into the state as a whole, the family that is the fire service ties its members in through the job's passion, dedication and loyalty. This is something Jack Waller witnessed first hand when he was diagnosed with Hodgkin's lymphoma in 2014 at the age of 49.

Waller had been positioned at the South King County Training Consortium as a Captain for only a handful of months when he received his diagnosis. When talking about his health verdict, he lists off more than a dozen names of fellow servicemen and women that took him in as their own.

"They just bear-hugged me, they treated me like family and I think that was huge in my ultimate positive outcome," says Waller, who is in his second year of remission. "I got lucky that I got a cancer I could get rid of but I think that having them working with me—that support—was crucial for me and was a positive part of the process."

Hodgkin's lymphoma, like its sibling type non-Hodgkin's lymphoma, is a cancer of the lymphatic system, a vital component of the defense of the immune system. Hodgkin's causes abnormal cell growth in the lymphatic system and, as it progresses, compromises the body's ability to fight off infection.

For Waller, after finally coming to terms with the abnormalities occurring in his body, he spoke with his sister, a former oncology nurse. She insisted he see a specialist, as he was showing textbook symptoms for lymphoma, like unexpected weight loss and a persistent cough.

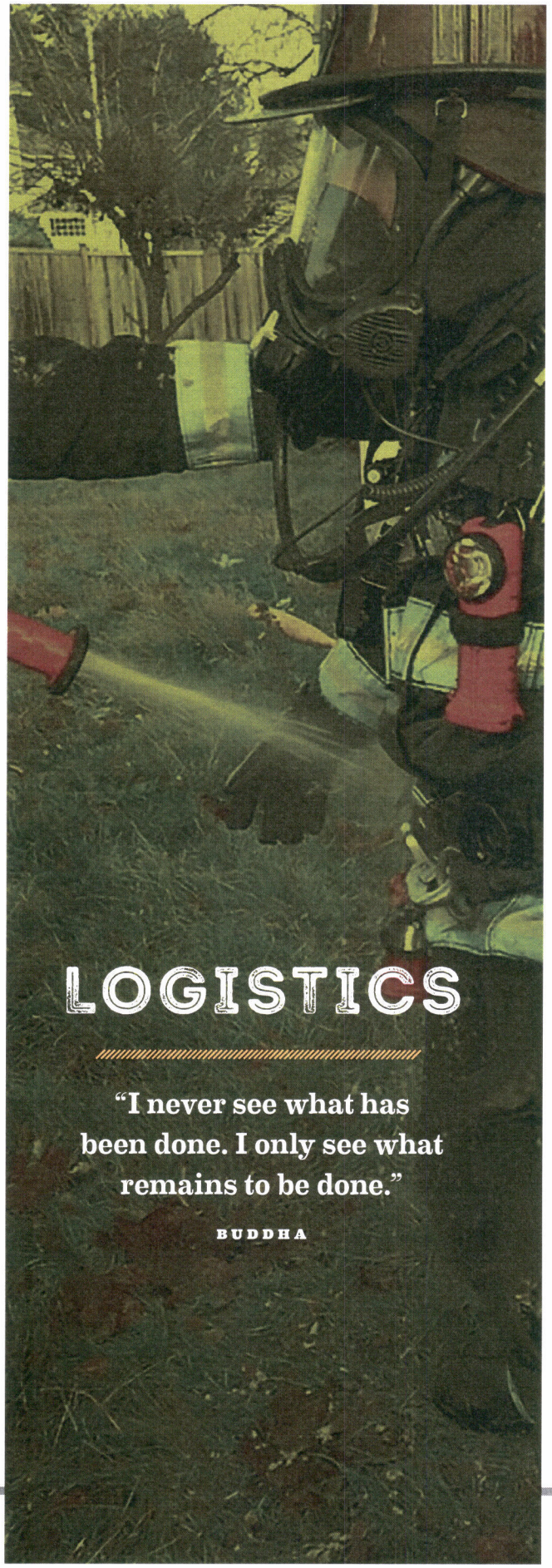
"In the fire service historically, we're all 10-feet-tall and bulletproof and nothing can happen to us," Waller says. "So when goofy, funky things start happening to your body that we can't explain, we deny it and try to explain it away. If something is happening to your body that you can't explain, don't wait, go to your doctor and don't stop with your doctor until you get an answer."

Although this type of lymphoma is not on the RCW's list of presumptive fire fighter cancers, it lists a primary cause as farm chemicals, something that Waller was exposed to growing up as a child and young adult in Eastern Washington as well as on the job. He plans to file an L&I claim over the diagnosis so the data is documented. "The more of us that come forward in this profession, at some point, there's a tipping point where they'll go 'wow, there are 5,000 fire fighters who've got Hodgkin's lymphoma.'"

More common among people half his age, Waller's diagnosis was a statistical oddity and struck a chord with his colleagues. "I was told there was a pretty sizable uptick in tenured people my age in the service that were going to the doctor for physicals," he says. "If nothing else, it got people to go to the doctor."

Waller, now a Battalion Chief at the Tukwila Fire Department, understands that the change in policy, especially on a statewide level, will take both time and money. "You're fighting 100 years of tradition unhampered by progress," he says. "It'll be gradual but our probationary fire fighters and the recruits that are coming in now won't know any different. As time goes by, we advance technology and our understanding of the disease and how it's affecting us as an occupation."

Cancer is an epidemic within this brotherhood of fire fighters, Waller insists as he counts the number of cancer-related funerals within the last few months. "Cancer is not discriminatory," he says. "It's not the 50-somethings or the 20-somethings in the service, it's all of us. Any little thing, no matter how inconvenient it might be at the time, if it's going to prevent you from what I had to go through and increase your quality of life when you retire, I'd have to say it's worth it."



LOGISTICS

"I never see what has been done. I only see what remains to be done."

BUDDHA

LAUNDRY

The employer will provide personnel with uniforms. This uniform is not designed to protect against hazardous materials, toxins or bloodborne pathogens, although these contaminants will occasionally come in direct contact with uniforms. Under no circumstances will employees take home uniforms that have been worn in a contaminated environment, nor those that are soiled with blood or other potentially infectious materials (OPIM).

- Washers, dryers or laundry services are to be provided by the employer. No equipment, detergents or disinfectants should be used other than those provided by the employer.
- Contaminated uniforms and linens should be washed with detergent in water between 140 and 160 degrees Fahrenheit for a minimum of 25 minutes. If low temperature laundry cycles are used, chemicals suitable for low temperature washing at proper concentration must be used.

HOUSEKEEPING

Develop cleaning procedures to mitigate contamination and to avoid cross-contamination from fire incident scenes to living quarters. Employees handling contaminated equipment, hose and turnouts will wear appropriate PPE (gloves, splash gown and N95 if appropriate) to protect against exposures from contaminated equipment.

Written schedules for station cleaning and methods of equipment decontamination, cleaning and disinfecting should be located at each work site.

DECONTAMINATION, CLEANING AND DISINFECTING

Gross Decontamination occurs at the scene and removes many of of the toxic products of combustion or biological contaminants. Cleaning occurs back at the fire station and uses soap, other cleaning products and warm water rinses. Disinfection can only happen after the object has been cleaned. Contact, or dwell, time is the amount of time required to "kill" the microorganisms. Disinfection products vary widely on their contact time, read the labels before using.

EQUIPMENT CLEANING

SCBA facemasks and tools are exposed to the same products of combustion as turnout gear. They are contaminated any time they are exposed to a smoky atmosphere, including, but not limited, to structure fires, car fires, dumpster fires, training fires or burnt food on the stove. If not properly cleaned, contaminated equipment will continue to expose personnel to carcinogens long after the fire.

- Gross decontamination of equipment should be done at the scene.
- Any time contact is made with the contaminated equipment at the scene or while cleaning, proper PPE that will limit dermal absorption should be used.
- Transportation of contaminated SCBAs, masks and other equipment:
    - Contaminated equipment should be grossly decontaminated first, then encapsulated if transporting in the fire engine to further reduce exposure or contamination to uncontaminated areas.
    - Contaminated equipment does not need to be encapsulated if it can be transported to the cleaning facility in a vehicle (e.g., pickup) that will not allow further cross-contamination of the apparatus cab, compartments or exposure to personnel.
- Equipment should be cleaned in a location that will allow for proper cleaning without further exposure to personnel or living quarters.
- After each use, all equipment will be cleaned according to manufacturer's recommendations.
- For most hand tools (axe, hooligan, shovel, etc.), use mild soap and water.
    - If necessary, scrub with a soft to medium bristled brush to remove stubborn contaminants.
    - Using a garden hose, completely rinse the soap from the tools.
- Gas powered equipment can be wiped free of smoke, soot and debris.

COMMON CHEMICALS FOUND IN RESIDENTIAL HOUSE FIRES:

- **Acrolein**
- **Aldehydes**
- **Ammonia**
- **Arsenic**
- **Benzene**
- **Benzyl chloride**
- **Carbon disulfide**
- **Carbon monoxide**
- **Formaldehyde**
- **Furfural**
- **Glutaraldehyde**
- **Hydrogen chloride**
- **Mercury vapor**
- **Naphthalene**
- **Nitrogen dioxide**
- **Nitrogen monoxide**
- **Ozone**
- **Phenol**
- **Sulfur dioxide**
- **Styrene**
- **Toluene**
- **Particulates**

BELOW: *To clean SCBA masks, remove electronic components and use a damp sponge or cloth to clean those parts. Scrub face piece with a brush, then ensure exhalation valve moves freely and hang mask to dry.*

SPECIFICS ON SCBA AND FACEMASKS CLEANING:

- The cylinder needs to be removed from the backpack for proper cleaning. It should be washed with warm, soapy water and thoroughly rinsed, making sure to clean all components of the cylinder (i.e., cylinder valve, gauge and cylinder body). After cleaning, the cylinder valve should be cracked opened to blow out any moisture that has collected in the valve opening.
- Masks can be cleaned in a commercial mask washer or ultrasonic cleaner designed specifically for SCBA masks, if allowed by the specific manufacturer; otherwise it can be cleaned inside and out to remove all contaminants and sanitized prior to being placed back in service.
- The backpack (minus cylinder) should be thoroughly cleaned in accordance to the manufacturer's recommendations. Warm soapy water, sponge and soft bristled brush should be used, with care taken to make sure all surfaces are thoroughly cleaned, including hard and soft surfaces (WAC 296-842).

SPECIFICS ON HOSE CLEANING:

- Contaminated fire hose should be cleaned per NFPA 1962 Standard for the Inspection, Care, and Use of Fire Hose, Couplings, and Nozzles and the Service Testing of Fire Hose.
- It is recommended to "dry" brush the hose using a soft/medium bristle brush. However, if the dirt cannot be thoroughly brushed from the hose, or if the hose has come in contact with harmful materials, the hose should be washed. Covered (nitrile, rubber) hoses are can be wiped dry.
- Unroll the hose and stretch it out in its entirety on a clean, level surface. Thoroughly rinse the fire hose with clean water.

Preliminary results presented in the Illinois Fire Service Institute's 2015 Cardiovascular & Chemical Exposure Risks in Modern Firefighting Interim Report indicate that "gross on-scene decon with water/detergent and scrubbing appears to be effective in bringing the PAH (polycyclic aromatic hydrocarbons) contamination to pre-fire levels."

- Fill a large bucket with mild, soapy water. The water should be ambient temperature. Using a long-handled brush with soft to medium bristles, scrub the entire length of hose.
- Turn the hose over to the opposite side and scrub.
- Using a garden hose, completely rinse the soap from the hose on both sides.
- Dry the hose thoroughly using the method best suited for the weather conditions and facility equipment (hanging in hose tower, hose dryer, etc.).

APPARATUS DECONTAMINATION, CLEANING AND DISINFECTING

Proper apparatus decontamination, cleaning and disinfecting are vital in limiting fire fighter exposure to contaminants.

- All apparatus cabs, compartments and equipment should be cleaned weekly and decontaminated after every incident or training that involved contaminants.
- Parking upwind, keeping windows closed and heaters and air conditioners off during fireground operations will minimize airborne contaminants from entering the cab.
- All cleaning can be done utilizing cleaning solutions, designated rags, mop buckets, brushes and disinfectants. HEPA vacuums are useful tools to pick up soot and other loose debris prior to cleaning with wet agents.

- Apparatus cab cleaning should utilize a top-down cleaning method followed by disinfecting. Special attention should be paid to computers, radios, map books, seats, steering wheel, floorboards and headsets. Disinfecting is intended to prevent the spread of contagious illnesses such as C Diff, MRSA, staph, etc.
- All cloth surfaces should be cleaned using a vacuum and/or steam extractor.
- Remove all equipment and use the top-down method to clean apparatus compartments. All equipment should be cleaned prior to being placed back on the apparatus.
- After cleaning is complete, utilize the department's cleaning program for the rags and mops. Wash hands, face and neck or shower.

PERSONAL VEHICLE

Contaminated turnouts should never be transported at any time in a personal vehicle. Use a fire department vehicle to transport contaminated turnouts to a designated facility for cleaning. By transporting contaminated turnouts in a personal vehicle, a member can subject their family and/or household to potential cross-contamination from the fireground.

Clean turnout gear may be transported in a personal vehicle in an enclosed container or encapsulated in a designated bag to avoid cross-contamination to personal belongings.

HOW TO CLEAN STRUCTURAL FIRE FIGHTING GLOVES

1 || Wear appropriate PPE, EMS nitrile or latex gloves for dermal protection.

2 || Fill a decon sink with approximately two inches of warm water and detergent of choice.

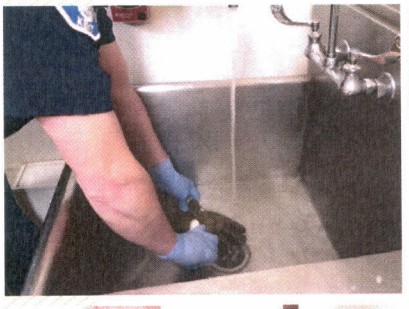
3 || Grab gloves by gauntlet, pinching off end or wear one glove at a time.

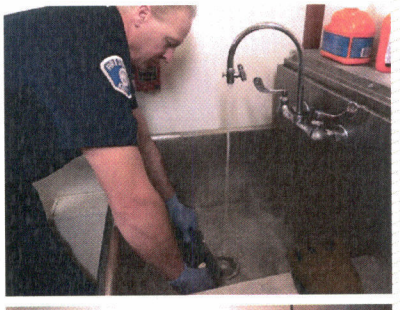
4 || Using a medium bristled brush, submerge the glove and scrub the exterior of the glove; working from gauntlet toward tip. Turn glove over and repeat on other side. Continue until glove is clean then rinse under running water. Perform same procedure on other glove.

5 || Empty sink and fill with clean water and approved sanitizer to clean the inside of the glove.

6 || Do not wring as the lining may become dislodged from the shell.

7 || Hang upside down to dry.





MODEL GUIDELINE

Purpose:

Numerous studies have proven that fire fighters are at greater risk of contracting many cancers as a result of their assigned duties. These studies have shown that proper use of the PPE, SCBA and a gross decontamination process are beneficial in limiting the duration of fire fighter exposure to toxic carcinogens. The (insert Fire Department) is committed to the overall health of employees; the (insert Fire Department) recognizes the increased risk of cancer associated with fire fighting activities. In an effort to provide a safe and healthy work environment, the (insert Fire Department) has created the following guideline to reduce the cancer risk to its employees.

Scope:

This guideline applies to all (insert Fire Department) employees.

References:

NFPA, Jurisdiction Policy, WAC, RCW, FCSN and IAFF.

Definitions:

See Appendix B.

Statement of Intent:

It is the intent of (insert Fire Department) to take proactive and reasonable steps to limit employee exposures to carcinogens.

COMMAND

1. Develop comprehensive accident, injury, illness and exposure policies and procedures

2. The Safety Committee can identify root cause and suggest changes to prevent future occurrences.

FINANCE

1. Budget for two sets of turnouts for all emergency response personnel.

2. Budget for PPE cleaning by an ISP or by purchasing the necessary equipment to clean PPE in an area designated as safe and appropriate to do so.

3. Consider grants, including AFG, for alternative funding for major/capital purchases.

4. Provide engineering controls and associated equipment to reduce or eliminate exhaust from internal combustion equipment in living and work areas.

5. Budget for annual physicals, other wellness programs and equipment.

PLANNING

1. Develop an exposure control plan to include green zones in stations and apparatus.

2. Use an apparatus design that reduces exposures and prevents cross-contamination by using solid, cleanable surfaces whenever possible.

3. Provide a hand washing station on every fire apparatus.

4. Design fire station to address exposure reduction and cross-contamination prevention.

5. Conduct testing to ensure a hazard-free work environment: MRSA, radon, asbestos, diesel exhaust, etc.

OPERATIONS: EMERGENCY

1. Ensure that all personnel are wearing full PPE and SCBA on all fire calls.

2. Establish hot, warm and cold hazard zones at the scene. Limit entry to necessary personnel only, and limit time in hot zone.

3. Limit the time support personnel (including driver/engineer, rehab, incident commander and other support staff) are in potentially contaminated areas.

4. Establish Gross Decontamination for every entry into a toxic smoke environment (including car fires and dumpster fires).

5. Provide warm water and soap, or if unavailable, use disposable wipes to clean hands, face and neck.

6. Establish Rehabilitation with medical surveillance when work event exceeds 2/30s or 1/45 cylinder or 45 minutes of strenuous labor, or as needed.

7. Release most contaminated personnel first to reduce continued exposures to toxic products of combustion. First in, first home.

8. Transport contaminated PPE in encapsulated bag to prevent further exposure to apparatus and personnel.

9. Allow personnel to return to fire station out of service to shower and change into clean PPE. Monitor dispatch frequency and do not pass a critical call returning to quarters.

OPERATIONS: ROUTINE ACTIVITIES

1. Ensure diesel exhaust capture systems or similar engineering controls are used every time the apparatus enters and/or exits the fire station.

2. To further reduce contamination that may be brought into the stations by response footwear, it is encouraged a station shoe be worn inside the living quarters of the fire stations.

3. Practice wellness in general. Conduct annual physicals including cancer screenings. Use sunscreen when outdoors, don't use tobacco and participate in daily exercise.

4. Document exposures, injuries and illness throughout career.

5. Conduct initial recruit and annual refresher training to include cancer awareness, wellness and fitness.

6. The Safety Committee will review occupational exposures in order to identify root causes and/or necessary mitigation efforts.

LOGISTICS

1. Establish PPE and uniform cleaning program for all entries into contaminated environments.

2. Provide a second set of turnouts for all emergency response personnel.

3. Institute an on-scene hood exchange program.

4. Maintain the exposure control plan to include cleaning, disinfecting and maintenance programs to reduce exposures in the fire station.

DEFINITIONS

APPARATUS: A mobile piece of fire equipment such as a pumper, aerial, tender, automobile, etc.

APPROVED: A method, equipment, procedure, practice, tool, etc., that is sanctioned, consented to, confirmed or accepted as good or satisfactory for a particular purpose or use by a person, or organization authorized to make such a judgment.

BLOODBORNE PATHOGENS: Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), human immunodeficiency virus (HIV) and other potentially infectious materials (OPIM).

CBRN: Chemical, biological, radiological and nuclear.

CHRONIC HEALTH EFFECT: An adverse health effect resulting from long-term exposure to a substance. The term is also applied to a persistent (months, years or permanent) adverse health effect resulting from a short-term (acute) exposure.

CLEANING: To make (something or someone) free of dirt, marks or mess, especially by washing, wiping or brushing.

CONTAMINATED: The presence or the reasonably anticipated presence of materials foreign to the normal atmospheres, blood, hazardous waste or other potentially infectious materials on an item or surface.

CONTAMINATION: The process of transferring a hazardous material from its source to people, animals, the environment or equipment, which may act as a carrier.

DECONTAMINATION: The physical or chemical process of cleansing an object to remove contaminants such as microorganisms or hazardous materials, including chemicals, radioactive substances and infectious diseases. Decontamination is sometimes abbreviated as "Decon." Also prevents the spread of contamination to other persons or equipment.

DISINFECTION: A procedure that inactivates virtually all recognized pathogenic microorganisms, but not necessarily all microbial forms (i.e., bacterial endospores) on inanimate objects.

ENGINE (PUMPER): A piece of apparatus equipped with hose and a pump for the purpose of supplying water under pressure through hose lines.

EXPOSURE OR EXPOSED: When an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (e.g., accidental or possible) exposure. "Subjected" in terms of health hazards includes any route of entry like inhalation, ingestion, skin contact or absorption (OSHA - 29 CFR 1910.1200).

FIRE APPARATUS: A fire department emergency vehicle used for rescue, fire suppression or other specialized functions.

FIRE DEPARTMENT FACILITY: Any building or area owned, operated, occupied or used by a fire department on a routine basis.

GROSS DECONTAMINATION: The initial phase of the decontamination process during which the amount of surface contaminant is significantly reduced.

HAZARD CONTROL ZONES:

- **COLD zone:** The control zone of an incident that contains the command post and such other support functions as are deemed necessary to control the incident.
- **WARM zone:** The control zone outside the hot zone where personnel and equipment undergo decontamination and the hot zone support takes place.
- **HOT zone:** The control zone immediately surrounding the hazard area, which extends far enough to prevent adverse effects to personnel outside the zone. The hot zone is presenting the greatest risk to members and will often be classified as an IDLH atmosphere.

HEALTH AND SAFETY OFFICER: The member of the fire department assigned and authorized as the administrator of the fire department health and safety program.

IDLH: Immediately dangerous to life and health. Exposure to airborne contaminants that is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment.

INCIDENT COMMANDER: The person in overall command of an emergency incident. This person is responsible for the direction and coordination of the response effort.

INCIDENT SAFETY OFFICER: The person assigned the command staff function of safety officer in the incident command system.

ISP: Independent Service Provider, relating to NFPA 1851 for the care and maintenance of structural fire fighting ensembles.

NFPA: National Fire Protection Association.

NIOSH: National Institute of Occupational Safety and Health.

OCCUPATIONAL EXPOSURE: Reasonably anticipated skin, eye, mucous membrane or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

OSHA: Occupational Safety and Health Administration.

OPIM: Other potentially infectious materials, which include the following body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva, any body fluid that is visibly contaminated with blood and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.

OVERHAUL: A fire fighting term involving the process of final extinguishment after the main body of a fire has been knocked down. All traces of fire must be extinguished at this time.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

- The equipment acts to shield or isolate a person from the chemical, physical and thermal hazards that may be encountered at a hazardous materials incident.
- Personal protective equipment includes both personal protective clothing and respiratory protection. Adequate personal protective equipment should protect the respiratory system, skin, eyes, face, hands, feet, head, body and hearing.
- Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

RCW: Revised Code of Washington.

REHABILITATION: The process of providing mental and medical evaluation, rest, hydration and nourishment to members who are engaged in emergency operations.

RESPIRATORY PROTECTION: Equipment designed to protect the wearer from the inhalation of contaminants.

RISK ASSESSMENT: To set or determine the possibility of suffering harm or loss, and to what extent.

SCBA: Self-contained breathing apparatus.

STATION (FIRE STATION): Structure in which fire service apparatus and/or personnel are housed.

STRUCTURAL FIRE FIGHTING PROTECTIVE CLOTHING: This category of clothing, often called turnout or bunker gear, refers to the protective clothing normally worn by fire fighters during structural fire fighting operations. It includes a helmet, coat, pants, boots, gloves and a hood. Structural fire fighters' protective clothing provides limited protection from heat but may not provide adequate protection from the harmful gases, vapors, liquids or dusts that are encountered during hazardous materials incidents.

TLV/TWA: Threshold limit values/ time weighted average.

TURNOUT CLOTHING: See structural fire fighting protective clothing.

VAPOR BARRIER: Material used to prevent or substantially inhibit the transfer of water, corrosive liquids and steam or other hot vapors from the outside of a garment to the wearer's body.

WAC: Washington Administrative Code.

WISHA: Washington Industrial Safety Health Act.

SAMPLE WELLNESS MEDICAL PHYSICAL EXAM (FCSN)

HANDS-ON PHYSICAL EXAMINATION

- **Vital Signs:** Head, neck, eyes, ears, nose and throat
- **Cardiovascular:** Inspection, auscultation, percussion and palpation
- **Pulmonary:** Inspection, auscultation, percussion and palpation
- **Gastrointestinal:** Inspection, auscultation, percussion and palpation
- **Genitourinary:** Hernia exam (see cancer screening)
- **Lymph Nodes**: The examination of organ systems must be supplemented with an evaluation of lymph nodes in the cervical, auxiliary and inguinal regions.
- **Neurological:** The neurologic exam for uniformed personnel must include a general mental status evaluation and general assessment of the major cranial/peripheral nerves (motor, sensory, reflexes).
- **Musculoskeletal:** Includes an overall assessment of range of motion (ROM) of all joints. Additionally, observation of the personnel performing certain standard office exercises or functions is helpful in assessing joint mobility and function.

BLOOD ANALYSIS

The following are components of the blood analysis. At a minimum, laboratory services must provide these components in their automated chemistry panel (SMAC 20) and complete blood count (CBC) protocols:

- White Blood Cell Count, Differential, Red Blood Cell Count (Hematocrit) and Platelet Count
- Liver Function Tests, which includes SGOT/AST, SGPT/ALT, LDH, Alkaline Phosphatase and Bilirubin
- C-Reactive Protein and Triglycerides
- Cholesterol, which includes Total Cholesterol, Low Density Lipoprotein (LDL-C) level, High Density Lipoprotein (HDL-C) level and Total Cholesterol/ HDL Ratio
- Glucose, if over 120 then HbA1c
- Blood Urea Nitrogen, Creatinine, Sodium, Potassium, Carbon Dioxide, Total Protein, Albumin and Calcium

URINALYSIS

- **Dip Stick:** Includes pH, Glucose, Ketones, Protein, Blood and Bilirubin
- **Microscopic:** Includes WBC, RBC, WBC Casts, RBC Casts and Crystals

VISION TESTS

Assessment of vision must include evaluation of distance, near, peripheral and color vision. Evaluate for common visual disorders.

PULMONARY (SPIROGRAM)

- Every year for smokers
- Every three years for nonsmoker

CHEST X-RAY

- Every five years

STRESS EKG* WITH VO2 VALUE CALCULATED

- Members 30-years-old and under will be tested on treadmill every third year.
- Those 30 to 39-years-old will be tested on treadmill every other year.
- Those 40 and older will be tested yearly.

**Abnormal Cardiac Follow-up — Electron Beam Tomography (EBT)*

ONCOLOGY SCREENING ELEMENTS

- Prostate Specific Antigen (PSA), fecal occult blood testing and skin exam
- Additional screenings based on need or at the request of the patient may also be provided during the base-line exam.

CANCER SCREENING

- Digital rectal exam
- Testicular exam
- Clinical breast examination
- Pap smear

IMMUNIZATIONS AND INFECTIOUS DISEASE SCREENING

- Tuberculosis Screen (Annual PPD)
- Hepatitis C Virus Screen
- Hepatitis B Virus Vaccine
- Tetanus/Diphtheria Vaccine (Booster)
- Measles, Mumps, Rubella Vaccine (MMR)
- Measles Vaccine, Mumps Vaccine
- Rubella Vaccine, Polio Vaccine, Hepatitis A Vaccine
- Varicella Vaccine, Influenza Vaccine
- HIV Screening (required to be offered)

HEAVY METAL AND SPECIAL EXPOSURE SCREENING (AS NEEDED)

Arsenic (urine), Mercury (urine), Lead (urine), Lead (blood), Aluminum, Antimony, Bismuth, Cadmium, Chromium, Copper, Nickel, Zinc - Organophosphates (RBC cholinesterase), Polychlorinated Biphenyls (blood)

(i) A work history and medical history with special attention to skin, respiratory and gastrointestinal systems, and those nonspecific symptoms, such as headache, nausea, vomiting, dizziness, weakness or other central nervous system dysfunctions that may be associated with acute or chronic exposure to AN.

(ii) A physical examination giving particular attention to central nervous system, gastrointestinal system, respiratory system, skin and thyroid.

(iii) A 14" x 17" posteroanterior chest x-ray.

(iv) Further tests of the intestinal tract, including fecal occult blood screening and proctosigmoidoscopy, for all workers 40 years of age or older, and for any other affected employees for whom, in the opinion of the physician, such testing is appropriate.

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SURVIVOR STORIES FROM:

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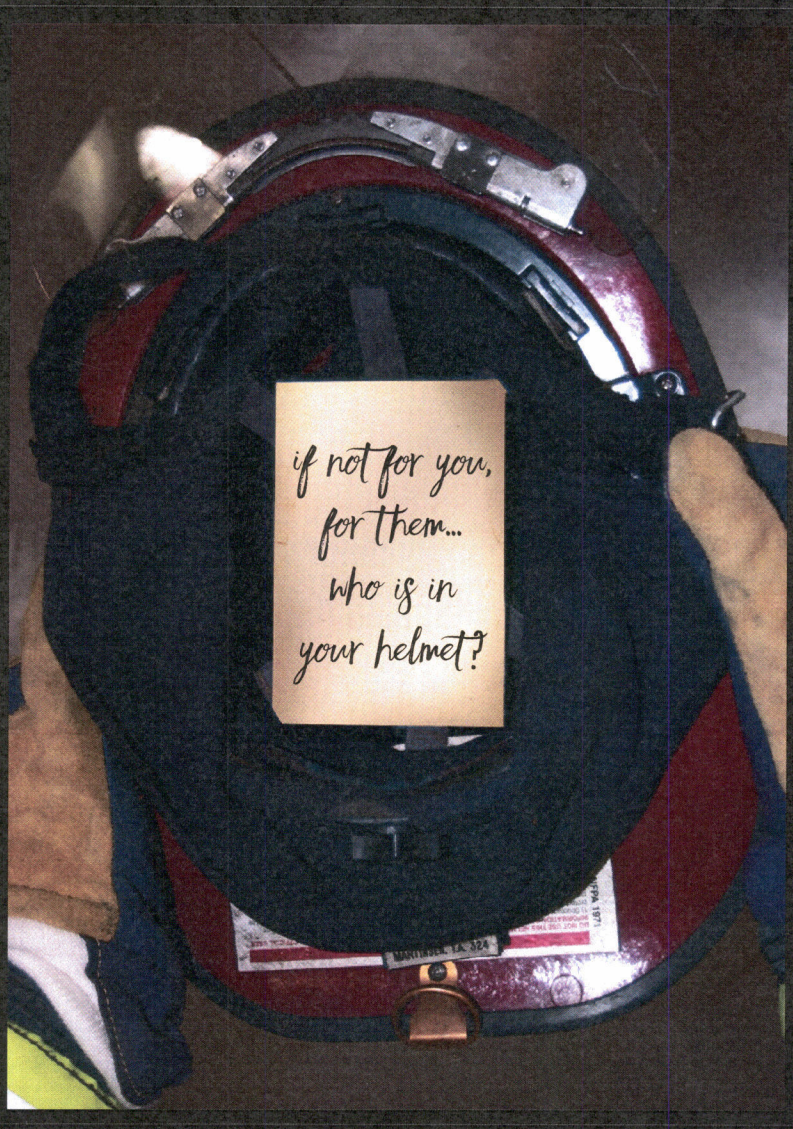

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EXHIBIT 3
DATE 3.15.2019
SB 160

Montana Municipal Interlocal Authority
Analysis of Proposed Legislation - DRAFT

Firefighter Presumptions (SB 1060)

March 13, 2019

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I. Executive Summary

The purpose of this report is to discuss our findings regarding the potential impact of Senate Bill 1060 (SB 1060). SB 1060 creates a presumption such that certain illnesses are presumed to be occupational for firefighters. Firefighters must meet certain requirements to be eligible for this presumption, and a statute of limitation applies. Our goal is to investigate the financial impact of SB 1060 on the Montana Municipal Interlocal Authority (MMIA), which is a pool of municipalities that covers workers' compensation costs for a large share of firefighters in Montana.

A. Summary of our Findings

SB 1060 creates a presumption that certain types of cancer as well as for cardiovascular disease and pulmonary/respiratory disease are occupational. The presumption applies to active and inactive firefighters, but there is a statute of limitations that firefighters must be within 10 years of active service to be eligible for the presumption. In addition, SB 1060 outlines other criteria for eligibility, such as minimum years of service (which varies by disease) and requirements regarding filing claims on a timely basis, obtaining physical exams, and the use of tobacco products. Using these parameters, we estimate SB 1060 will add approximately of $1,972,000 to MMIA's workers' compensation annual costs. The following table summarizes our findings.

Table 1
Estimated Annual Impact of SB 1060 for MMIA
($000s)

	Annual Impact		
	Active	Inactive	Total
Medical	459	1,036	1,495
Indemnity	321	n/a	321
Loss Adjustment Expense	78	78	156
Total Annual Cost	858	1,114	1,972

The above results are presented on an undiscounted basis, meaning there has been no adjustment for net present value. Also, the results reflect that firefighter cancer risk factors differ from those of the general population, as reported in a study released by NIOSH in 2013[1]. While our results reflect the projected incidence of the cancers listed in SB 1060, we have only reflected deaths from cardiovascular and lung/pulmonary diseases. The incidence of cardiovascular disease in the adult population is very high, and so the cost of non-fatal cardiovascular disease is likey to be quite high.

[1] Daniels RD, Kubale TL, Yiin JH, et al. Occup Environ Med Published Online First Oct. 14, 2013, "Mortality and cancer incidence in a pooled cohort of US firefighters from San Francisco, Chicago, and Philadelphia (1950-2009)."

II. Background

SB 1060 creates a presumption such that certain illnesses are presumed to be occupational for firefighters. Firefighters must meet certain requirements to be eligible for this presumption, and a statute of limitation applies.

The conditions under which certain illnesses and diseases are presumed to be occupational and the death benefits are summarized as follows.

1. Statute of Limitations: Firefighters must be within 10 years of active duty as a firefighter.

2. Minimum Years of Service: Firefighters must have a served a minimum number of years. The minimum number of years varies by disease, as follows:

Table 2
Eligibility Requirement
Minimum Number of Service Years

Disease	Minimum # of Years As Firefighter
Bladder cancer after	12
Brain cancer of any type	10
Breast cancer if the diagnosis occurs before the firefighter is 40 years old and is not known to be associated with a genetic predisposition to breast cancer	5
Cardiovascular disease	10
Colorectal cancer	10
Esophageal cancer	10
Kidney cancer	15
Leukemia	5
Mesothelioma	10
Multiple myeloma	15
Non-Hodgkin's lymphoma	15
Pulmonary or respiratory disease (that can reasonably be caused by firefighting activities)	4

3. Filing of Claim: The firefighter must file a claim on a timely basis.

4. Medical Exams: Firefighters must undergo medical exams, as follows:

    a. At Time of Hire: Firefighter have a medical examination within 90 days of hiring, with no substantial objective medical evidence of the presumptive occupational disease
    b. Subsequent: Firefighter must have subsequent periodic medical examinations at least once every 2 years after being hired.

5. Tobacco Use: Firefighters may not

    a. Be a regular user of tobacco products
    b. Have a history of regular tobacco use in the 10 years preceding the filing of the claim
    c. Have been exposed by a cohabitant who regularly and habitually used tobacco products within the home for a period of 10 or more years prior to the diagnosis.

For the purposes of this study we reflected the statute of limitation and minimum number of years of service. We did not reflect criteria related to the timely filing of a claim, medical exams, and tobacco use.

III. Methodology

Our approach to estimating the annual cost is based on first projecting the number of claims and then multiplying by the expected claim size. It should be noted that whereas we quantified the cost of cancer incidences, we only included the impact of fatalities associated with cardiovascular and lung/pulmonary disease. The incidence of cardiovascular disease is quite large in the adult population, so it is possible that substantial costs are missing from this analysis. Our methodology is outlined in the following steps:

1. Expected Number of Annual Claims: In this step we estimate the annual number of claims, represented by cancer incidences and heart & lung/pulmonary disease fatalities. Annual claims are based on exposure (the number of firefighters) times incidence rates.

    a. Number of Firefighters: In order to estimate the number of firefighters eligible for the proposed presumptions, we separately considered active and inactive firefighters. We based the total number of active firefighters on MMIA (600 active), and we utilized the latest available FURS actuarial report to estimate the number of inactive firefighters (665 at 6/30/18). The active and inactive populations are shown in Exhibit 5, Page 2 and Exhibit 6, Page 3, respectively.

    b. Applying Eligibility Criteria: The distributions of both active and inactive firefighters by age and by years of service are based on the FURS actuarial report as of 6/30/18. We estimated the number of active with various years of service in Exhibit 5, Page 1. We estimated the number of inactive who are within 10 years of active service based on retirement ages in Exhibit 6, Page 3.

    c. Incidence and Fatality Rates: Cancer incidence and heart & lung disease fatality rates were based on the general population and then adjusted to Montana firefighters. Rates were applied to the expected population of firefighters by age. Based on Montana statistics, we assumed that 83% of firefighters are male and 17% are female.

        i. Cancer incidence rates were based on the general population by age & gender from the National Cancer Institute: Surveillance, Epidemiology, and End Results Program (SEER) results (Exhibit 8, page 1). Predictions of incidence by type of cancer are in Exhibit 3, pages 1-11. In addition, we adjusted the general population incidence rates for firefighter-specific exposure by applying factors as indicated in NIOSH study (Exhibit 2, column 2).

ii. Heart and lung/pulmonary disease mortality rates were based on the general population by age and gender from the Center for Disease Control (Exhibit 8, page 2). General incidence rates were not measured.

d. Expected Claims: We projected future claims based on the number of active and inactive projected firefighters who are eligible for the presumption times disease incidence rates. These projections are shown in Exhibits 2 & 3.

2. Average Claim Size: We separately projected medical, indemnity and loss adjustment expense costs for each claim (Exhibit 7, page 1). Medical and indemnity costs were based on the average claim size of permanent total disability claims in Montana as reported by the National Council of Compensation Insurance (NCCI). Indemnity costs were adjusted to reflect the higher average wage of firefighters compared to the general Montana population. We also capped the maximum indemnity benefits to reflect Montana's maximum weekly permanent disability benefit. Loss adjustment expense (LAE) was projected based on the average LAE as a percent of loss (14.4%) for all claims in Montana as reported by the NCCI (Exhibit 2).

3. Total Cost: The projected cost is calculated based on the number of projected claims from step #1 times the projected cost per claim in step #2. Indemnity costs are not applied to inactive firefighters. This is shown in Exhibit 2 and summarized in Exhibit 1.

IV. Discussion of NIOSH Study

One key assumption in this report is the variance in cancer rates between firefighters and the general population. We have reviewed the results of the NIOSH study "Mortality and cancer incidence in a pooled cohort of US firefighters from San Francisco, Chicago and Philadelphia (1950–2009)" and incorporated the findings into our report. The study was released in October 2013. The fact that this study focused on 3 urban areas does raise questions about its applicability to non-urban areas; however, we are not aware of a similar study focused on non-urban firefighters.

The NIOSH Study is directly relevant to the issues addressed in SB 1060 because it specifically analyzed the cancer incidence and mortality rates for firefighters. The study followed a cohort of 29,993 firefighters employed between 1950 and 2009, including 5,313 from San Francisco. Firefighter job classifications included in the study were as follows: "general classifications of firefighters, firefighter paramedics, and fire department arson investigator" (Page 2). The study cites concerns related to cancer risk for firefighters, because firefighters are potentially "exposed to many known carcinogens (e.g., polycyclic aromatic hydrocarbons (PAHs), formaldehyde, benzene, 1,3-butadiene, asbestos, and arsenic) in volatilized combustion and pyrolysis products or debris" (Page 1).

The study did not find elevated mortality rates for firefighters in general; however, it did find elevated incidence and mortality due to specific types of cancer. It is possible that the elevated rate of cancer is offset by the fact that firefighters are typically healthier than the general population, thus their overall mortality is not elevated. For example, the study cites that firefighters are less likely to smoke than the general population.

The key findings of the NIOSH study are summarized in the following table (Page 4 of NIOSH). This shows that the firefighters in this study had higher mortality rates than the general U.S. population for cancer in general and for most specific types of cancer. However, only eight of the nineteen types of cancer included in the study had at least a 95% confidence of elevated cancer mortality.

Table 3
Key Findings of NIOSH Study (Mortality)

Underlying Cause (Cancer)	# of Observations (Deaths)[1]	% of Observations Above/ (Below) Expected[2]	Range of 95% Confidence Level[3]	Likelihood That Cancer is Elevated, Based on LeMasters *et al*[4]
	(A)	(B)	(C)	(D)
All Cancers	3,285	14%	10% to 18%	Unlikely
Oesophagus	113	39%	14% to 67%	Unlikely
Stomach	110	10%	-9% to 33%	Possible
Intestine	326	30%	16% to 44%	NA
Large intestine	264	31%	16% to 48%	Possible
Small intestine	8	66%	-28% to 227%	NA
Rectum	89	45%	16% to 78%	Possible
Lung	1,046	10%	4% to 17%	Unlikely
Breast	8	39%	-40% to 173%	NA
Prostate	282	9%	-4% to 22%	Probable
Other male genital	<5	-53%	-87% to 20%	NA
Testes	<5	-27%	-85% to 114%	Possible
Kidney	94	29%	5% to 58%	Unlikely
Bladder	84	-1%	-21% to 22%	Unlikely
Brain	73	1%	-21% to 27%	Possible
Non-Hodgkin lymphoma	123	17%	-3% to 40%	Probable
Leukaemia	122	10%	-9% to 31%	Possible
Multiple myeloma	42	-11%	-36% to 20%	Probable
Mesothelioma	12	100%	3% to 249%	NA
Buccal and pharynx	94	40%	13% to 72%	Possible

[1] The number of deaths of those included in the study.

[2] The percentage that the observed number of deaths was greater (or less) than expected. The expected number of deaths was based on mortality assumptions from the general U.S. population. The NIOSH study calculates Standardized Mortality Ratios (SMRs), which represents the number of observed divided by expected mortalities. Therefore, the SMR minus one equals the percentage that observed mortality is above or below expected mortality.

[3] This is the statistical range in which one can be 95% sure that cancers of firefighters are above or below the general population. For example, the range for all cancers is 10% to 18%. This means that based on the findings in this report, one can be 95% confident that firefighters such as those included in this study have a risk of mortality due to cancer that is between 10% and 18% above that of the general U.S. population.

[4] Prior to the release of the NIOSH article, LeMasters et al released a meta-analysis, which is essentially a review of other studies. The findings of this meta-analysis are summarized in this column.

In addition to the issue of whether firefighters generally have an elevated risk of cancer, there are several other issues discussed in the NIOSH study that are relevant to SB 1060.

1. Gender: About 3.3% of the firefighters included in the NIOSH study were female (Page 3). Females did not show an elevated risk for mortality due to cancer, but females did have a slightly elevated risk of the incidence of cancer (Page 5). However, it should be emphasized that females made up a relatively small sample size.

2. Race: About 16.7% of the firefighters included in the NIOSH study were non-Caucasian (Page 3). Non-Caucasians had a decreased risk of overall mortality and mortality due to cancer (Page 5). The incidence of cancer among non-Caucasians was close to expected levels.

3. Regional Differences: Since MMIA is specifically interested in the experience of firefighters in Montana, it is important to examine if the results varied by location. The NIOSH study did not find significant differences in cancer rates between the three locations analyzed: San Francisco, Chicago, and Philadelphia (Page 8).

4. Age Groups: The NIOSH study did not find substantial differences in the amount that firefighter cancer mortality varied from general U.S. cancer mortality by age group.

5. Amount That Observed Mortality Exceeds Expected: We believe the NIOSH study could be helpful to public policymakers in evaluating workers' compensation presumptions. For example, the NIOSH study recorded 3,285 firefighter cancer death observations, which was 14% higher than would have been expected using the general U.S. population as a reference. This means that if the group in the study had been the general U.S. population, then one would have expected about 2,880 cancer deaths. The additional 405 deaths (3,285 minus 2,880) are associated with risks and exposures faced by firefighters. For some types of cancer the firefighter mortality was slightly higher than expected, whereas for other types it was much higher than expected.

V. Limitations

There are several limitations in the findings of this report regarding the impact of SB 1060. Many of the key limitations are elaborated below.

1. Non-Fatal Heart and Lung/Pulmonary Disease Costs: This report excludes these codes, which could be substantial.

2. Cost per Claim: We have assumed that claims arising from the proposed presumptions will have costs similar to those of other permanent total disability claims in Montana. While the other permanent total disability claims may be similar in seriousness, they arise from different medical conditions and so may have differing costs.

3. Mortality due to Heart and Lung/Pulmonary Disease: We have assumed that firefighters and the general population have similar mortality rates related to these diseases, after adjusting for age and gender mix.

4. NIOSH Study: We have incorporated the results of the NIOSH study to adjust our expectation of firefighter cancer incidence. However, this study is based on data from urban centers and so may have limited applicability to non-urban firefighters.

Exhibits

Montana Municipal Interlocal Authority
Estimated Annual Cost of Cancer & Heart/Lung Disease Presumption

All Firefighters (Active and Inactive)

Cost	Active (1)	Inactive (2)	Total (3) (1) + (2)
Medical	459,000	1,036,000	1,495,000
Indemnity	321,000	-	321,000
Loss Adjustment Expense	78,000	78,000	156,000
Total	858,000	1,114,000	1,972,000

(1) Exhibit 2, Page 1
(2) Exhibit 2, Page 2

Montana Municipal Interlocal Authority

Estimated Annual Cost of Cancer & Heart/Lung Disease Presumption

Active Firefighters

Disease	Annual # of Firefighters Diagnosed Disease Unadjusted (1)	Adjustment for Firefighter Incidence Rates (2)	Annual # of Firefighters Diagnosed with Disease Adjusted (3)=(1)x(2)	Average Medical Cost/ Claim (4)	Average Indemnity Cost/ Claim (5)	Loss & LAE/ Loss (6)	Loss & LAE (7) (3)x[(4)+(5)]x(6)
Cancer (Incidence)							
Bladder/Urinary	0.03	1.12	0.03	640,000	448,000	1.144	36,036
Brain	0.02	1.02	0.02	640,000	448,000	1.144	21,758
Breast	0.08	1.26	0.10	640,000	448,000	1.144	124,915
Colorectal	0.08	1.18	0.10	640,000	448,000	1.144	123,182
Esophagus	0.01	1.62	0.02	640,000	448,000	1.144	20,543
Kidney	0.03	1.27	0.04	640,000	448,000	1.144	51,572
Leukemia	0.03	0.94	0.03	640,000	448,000	1.144	39,443
Lung	0.08	1.12	0.09	640,000	448,000	1.144	112,502
Mesothelioma	0.00	2.29	0.00	640,000	448,000	1.144	3,173
Myeloma	0.01	0.72	0.01	640,000	448,000	1.144	8,405
Non-Hodgkins Lymphoma	0.03	0.99	0.03	640,000	448,000	1.144	36,588
Other Disease (Mortality Only)							
Heart Disease	0.22	1.00	0.22	640,000	448,000	1.144	279,851
Chronic Lower Respiratory	0.03	1.00	0.03	640,000	448,000	1.144	35,105
Total	0.66	1.09	0.72	640,000	448,000	1.144	857,967

(1) Exhibit 3: Subject to proposed legislative constraints regarding years of service

(2) Based on Niosh Study: Mortality and cancer incidence in a pooled cohortof US firefighters from San Francisco, Chicago and Philadelphia (1950–2009)
Daniels RD,Kubale TL, Yiin JH, et al.Occup Environ MedPublished Online First: October 14, 2013 doi:10.1136/oemed-2013-101662

(4),(5) Exhibit 7, Page 1

(6) 2018 NCCI Statistical Bulletin (Permanent Total)

Montana Municipal Interlocal Authority

Exhibit 2
Page 2

Estimated Annual Cost of Cancer & Heart/Lung Disease Presumption

Inactive Firefighters (Retired and Disability)

Disease	Annual # of Firefighters Diagnosed with Disease Unadjusted (1)	Adjustment for Firefighter Incidence Rates (2)	Annual # of Firefighters Diagnosed with Disease Adjusted (3)=(1)x(2)	Average Medical Cost/ Claim (4)	Average Indemnity Cost/ Claim (5)	Loss & LAE/ Loss (6)	Loss & LAE (7) (3)x[(4)+(5)]x(6)
Cancer (Incidence)							
Bladder/Urinary	0.09	1.12	0.10	640,000	-	1.144	72,024
Brain	0.02	1.02	0.02	640,000	-	1.144	18,222
Breast	0.10	1.26	0.13	640,000	-	1.144	94,543
Colorectal	0.18	1.18	0.21	640,000	-	1.144	152,806
Esophagus	0.03	1.62	0.04	640,000	-	1.144	31,939
Kidney	0.09	1.27	0.11	640,000	-	1.144	82,475
Leukemia	0.05	0.94	0.05	640,000	-	1.144	34,370
Lung	0.22	1.12	0.25	640,000	-	1.144	180,633
Mesothelioma	0.00	2.29	0.01	640,000	-	1.144	5,646
Myeloma	0.03	0.72	0.02	640,000	-	1.144	15,696
Non-Hodgkins Lymphoma	0.08	0.99	0.08	640,000	-	1.144	57,522
Other Disease (Mortality Only)							
Heart Disease	0.50	1.00	0.50	640,000	-	1.144	368,002
Chronic Lower Respiratory	0.10	1.00	0.10	640,000	-	1.144	71,878
Total	1.49	1.09	1.62	640,000	-	1.144	1,113,877

(1) Exhibit 6: Subject to proposed legislative constraints regarding years of service

(2) Based on Niosh Study: Mortality and cancer incidence in a pooled cohortof US firefighters from San Francisco, Chicago and Philadelphia (1950–2009)
Daniels RD,Kubale TL, Yiin JH, et al.Occup Environ MedPublished Online First: October 14, 2013 doi:10.1136/oemed-2013-101662

(4),(5) Exhibit 7, Page 1

(6) 2018 NCCI Statistical Bulletin

Montana Municipal Interlocal Authority
Estimated Annual Incidence of Cancer

Active Firefighters
Bladder Cancer

Age	# with 12 or more Years of Service (1)	Incidence Rate Bladder Cancer (2)	# of Incidences of Bladder Cancer (3) (1) x (2)	Avg. Salary with 12 or more Yrs. of Service (4)
< 25	-	0.003%	-	-
25 to 29	-	0.003%	-	-
30 to 34	9	0.003%	0.000	74,580
35 to 39	30	0.003%	0.001	80,508
40 to 44	51	0.003%	0.001	86,007
45 to 49	71	0.003%	0.002	87,090
50 to 54	38	0.033%	0.012	91,326
55 to 59	22	0.033%	0.007	92,328
60 to 64	4	0.033%	0.001	96,391
65 to 69	-	0.127%	-	-
70 and up	1	0.127%	0.001	83,179
Total	224	0.012%	0.026	90,482

(1) Exhibit 5, Page 1
(2) Exhibit 8
(4) Exhibit 5, Page 1

Montana Municipal Interlocal Authority
Estimated Annual Incidence of Cancer

Active Firefighters
Brain Cancer

Age	# with 10 or more Years of Service (1)	Incidence Rate Brain Cancer (2)	# of Incidences of Brain Cancer (3) (1) x (2)	Avg. Salary with 10 or more Yrs. of Service (4)
< 25	-	0.004%	-	-
25 to 29	-	0.004%	-	-
30 to 34	20	0.004%	0.001	75,383
35 to 39	61	0.004%	0.002	78,422
40 to 44	77	0.004%	0.003	83,768
45 to 49	82	0.004%	0.003	86,370
50 to 54	39	0.011%	0.004	91,131
55 to 59	23	0.011%	0.003	91,525
60 to 64	5	0.011%	0.000	97,672
65 to 69	-	0.020%	-	-
70 and up	1	0.020%	0.000	83,179
Total	308	0.006%	0.017	86,493

(1) Exhibit 5, Page 1
(2) Exhibit 8
(4) Exhibit 5, Page 1

Montana Municipal Interlocal Authority
Estimated Annual Incidence of Cancer

Active Firefighters
Breast Cancer

Age	# with 5 or more Years of Service (1)	Incidence Rate Breast Cancer (2)	# of Incidences of Breast Cancer (3) (1) x (2)	Avg. Salary with 5 or more Yrs. of Service (4)
< 25	-	0.013%	-	-
25 to 29	14	0.013%	0.002	68,566
30 to 34	72	0.013%	0.009	69,346
35 to 39	88	0.013%	0.011	76,469
40 to 44	99	0.013%	0.012	81,637
45 to 49	89	0.013%	0.011	86,546
50 to 54	41	0.047%	0.019	91,321
55 to 59	23	0.047%	0.011	91,525
60 to 64	7	0.047%	0.003	95,175
65 to 69	-	0.080%	-	-
70 and up	1	0.080%	0.001	83,179
Total	434	0.018%	0.080	84,229

(1) Exhibit 5, Page 1
(2) Exhibit 8
(4) Exhibit 5, Page 1

Montana Municipal Interlocal Authority
Estimated Annual Incidence of Cancer

Active Firefighters
Colorectal Cancer

Age	# with 10 or more Years of Service (1)	Incidence Rate Colorectal Cancer (2)	# of Incidences of Colorectal Cancer (3) (1) x (2)	Avg. Salary with 10 or more Yrs. of Service (4)
< 25	-	0.012%	-	-
25 to 29	-	0.012%	-	-
30 to 34	20	0.012%	0.002	75,383
35 to 39	61	0.012%	0.007	78,422
40 to 44	77	0.012%	0.010	83,768
45 to 49	82	0.012%	0.010	86,370
50 to 54	39	0.079%	0.031	91,131
55 to 59	23	0.079%	0.018	91,525
60 to 64	5	0.079%	0.004	97,672
65 to 69	-	0.161%	-	-
70 and up	1	0.161%	0.001	83,179
Total	308	0.027%	0.084	88,341

(1) Exhibit 5, Page 1
(2) Exhibit 8
(4) Exhibit 5, Page 1

Montana Municipal Interlocal Authority
Estimated Annual Incidence of Cancer

Active Firefighters
Esophageal Cancer

Age	# with 10 or more Years of Service (1)	Incidence Rate Esphageal Cancer (2)	# of Incidences of Esphageal Cancer (3) (1) x (2)	Avg. Salary with 10 or more Yrs. of Service (4)
< 25	-	0.001%	-	-
25 to 29	-	0.001%	-	-
30 to 34	20	0.001%	0.000	75,383
35 to 39	61	0.001%	0.001	78,422
40 to 44	77	0.001%	0.001	83,768
45 to 49	82	0.001%	0.001	86,370
50 to 54	39	0.011%	0.005	91,131
55 to 59	23	0.011%	0.003	91,525
60 to 64	5	0.011%	0.001	97,672
65 to 69	-	0.029%	-	-
70 and up	1	0.029%	0.000	83,179
Total	308	0.003%	0.010	89,480

(1) Exhibit 5, Page 1
(2) Exhibit 8
(4) Exhibit 5, Page 1

Montana Municipal Interlocal Authority
Estimated Annual Incidence of Cancer

Active Firefighters
Kidney Cancer

Age	# with 15 or more Years of Service (1)	Incidence Rate Kidney Cancer (2)	# of Incidences of Kidney Cancer (3) (1) x (2)	Avg. Salary with 15 or more Yrs. of Service (4)
< 25	-	0.007%	-	-
25 to 29	-	0.007%	-	-
30 to 34	1	0.007%	0.000	73,376
35 to 39	9	0.007%	0.001	83,637
40 to 44	33	0.007%	0.002	89,366
45 to 49	63	0.007%	0.005	88,168
50 to 54	37	0.039%	0.014	91,618
55 to 59	21	0.039%	0.008	93,531
60 to 64	4	0.039%	0.001	94,470
65 to 69	-	0.081%	-	-
70 and up	1	0.081%	0.001	83,179
Total	169	0.019%	0.033	91,191

(1) Exhibit 5, Page 1
(2) Exhibit 8
(4) Exhibit 5, Page 1

Montana Municipal Interlocal Authority
Estimated Annual Incidence of Cancer

Active Firefighters
Leukemia

Age	# with 5 or more Years of Service (1)	Incidence Rate Leukemia (2)	# of Incidences of Leukemia (3) (1) x (2)	Avg. Salary with 5 or more Yrs. of Service (4)
< 25	-	0.005%	-	-
25 to 29	14	0.005%	0.001	68,566
30 to 34	72	0.005%	0.004	69,346
35 to 39	88	0.005%	0.005	76,469
40 to 44	99	0.005%	0.005	81,637
45 to 49	89	0.005%	0.005	86,546
50 to 54	41	0.020%	0.008	91,321
55 to 59	23	0.020%	0.005	91,525
60 to 64	7	0.020%	0.001	95,175
65 to 69	-	0.057%	-	-
70 and up	1	0.057%	0.001	83,179
Total	434	0.008%	0.034	84,372

(1) Exhibit 5, Page 1
(2) Exhibit 8
(4) Exhibit 5, Page 1

Montana Municipal Interlocal Authority
Estimated Annual Incidence of Cancer

Active Firefighters
Lung Cancer

Age	# with 4 or more Years of Service (1)	Incidence Rate Lung Cancer (2)	# of Incidences of Lung Cancer (3) (1) x (2)	Avg. Salary with 4 or more Yrs. of Service (4)
< 25	-	0.005%	-	-
25 to 29	14	0.005%	0.001	66,923
30 to 34	72	0.005%	0.004	69,246
35 to 39	88	0.005%	0.004	75,677
40 to 44	99	0.005%	0.005	81,299
45 to 49	89	0.005%	0.004	86,546
50 to 54	41	0.085%	0.035	91,321
55 to 59	23	0.085%	0.019	91,525
60 to 64	7	0.085%	0.006	94,100
65 to 69	-	0.297%	-	-
70 and up	1	0.297%	0.003	83,179
Total	434	0.019%	0.081	88,467

(1) Exhibit 5, Page 1
(2) Exhibit 8
(4) Exhibit 5, Page 1

Montana Municipal Interlocal Authority
Estimated Annual Incidence of Cancer

Active Firefighters
Mesothelioma

Age	# with 10 or more Years of Service (1)	Incidence Rate Mesothelioma (2)	# of Incidences of Mesothelioma (3) (1) x (2)	Avg. Salary with 10 or more Yrs. of Service (4)
< 25	-	0.000%	-	-
25 to 29	-	0.000%	-	-
30 to 34	20	0.000%	0.000	75,383
35 to 39	61	0.000%	0.000	78,422
40 to 44	77	0.000%	0.000	83,768
45 to 49	82	0.000%	0.000	86,370
50 to 54	39	0.001%	0.000	91,131
55 to 59	23	0.001%	0.000	91,525
60 to 64	5	0.001%	0.000	97,672
65 to 69	-	0.006%	-	-
70 and up	1	0.006%	0.000	83,179
Total	308	0.000%	0.001	88,625

(1) Exhibit 5, Page 1
(2) Exhibit 8
(4) Exhibit 5, Page 1

Montana Municipal Interlocal Authority
Estimated Annual Incidence of Cancer

Active Firefighters
Multiple Myeloma

Age	# with 15 or more Years of Service (1)	Incidence Rate Multiple Myeloma (2)	# of Incidences of Multiple Myeloma (3) (1) x (2)	Avg. Salary with 15 or more Yrs. of Service (4)
< 25	-	0.001%	-	-
25 to 29	-	0.001%	-	-
30 to 34	1	0.001%	0.000	73,376
35 to 39	9	0.001%	0.000	83,637
40 to 44	33	0.001%	0.000	89,366
45 to 49	63	0.001%	0.001	88,168
50 to 54	37	0.012%	0.005	91,618
55 to 59	21	0.012%	0.003	93,531
60 to 64	4	0.012%	0.000	94,470
65 to 69	-	0.034%	-	-
70 and up	1	0.034%	0.000	83,179
Total	169	0.006%	0.009	91,420

(1) Exhibit 5, Page 1
(2) Exhibit 8
(4) Exhibit 5, Page 1

Montana Municipal Interlocal Authority
Estimated Annual Incidence of Cancer

Active Firefighters
Non-Hodgkins Lymphoma

Age	# with 15 or more Years of Service (1)	Incidence Rate Non-Hodgkins Lymphoma (2)	# of Incidences of Non-Hodgkins Lymphoma (3) (1) x (2)	Avg. Salary with 15 or more Yrs. of Service (4)
< 25	-	0.008%	-	-
25 to 29	-	0.008%	-	-
30 to 34	1	0.008%	0.000	73,376
35 to 39	9	0.008%	0.001	83,637
40 to 44	33	0.008%	0.003	89,366
45 to 49	63	0.008%	0.005	88,168
50 to 54	37	0.034%	0.012	91,618
55 to 59	21	0.034%	0.007	93,531
60 to 64	4	0.034%	0.001	94,470
65 to 69	-	0.082%	-	-
70 and up	1	0.082%	0.001	83,179
Total	169	0.018%	0.030	90,977

(1) Exhibit 5, Page 1
(2) Exhibit 8
(4) Exhibit 5, Page 1

Montana Municipal Interlocal Authority
Estimated Annual Mortality from Heart Disease

Active Firefighters
Heart Disease (Mortality Only)

Age	# with 10 or more Years of Service (1)	Incidence Rate Heart Disease (2)	# of Incidences of Heart (3) (1) x (2)	Avg. Salary with 10 or more Yrs. of Service (4)
< 25	-	0.004%	-	-
25 to 29	-	0.006%	-	-
30 to 34	20	0.012%	0.002	75,383
35 to 39	61	0.023%	0.014	78,422
40 to 44	77	0.042%	0.032	83,768
45 to 49	82	0.074%	0.061	86,370
50 to 54	39	0.128%	0.050	91,131
55 to 59	23	0.201%	0.046	91,525
60 to 64	5	0.295%	0.013	97,672
65 to 69	-	0.409%	-	-
70 and up	1	0.609%	0.005	83,179
Total	308	0.073%	0.225	88,094

(1) Exhibit 5, Page 1
(2) Exhibit 8, Page 2
(4) Exhibit 5, Page 1

Montana Municipal Interlocal Authority
Estimated Annual Mortality from Lung Disease

Active Firefighters
Chronic Lower Respiratory Disease (Mortality)

Age	# with 10 or more Years of Service (1)	Incidence Rate Heart Disease (2)	# of Incidences of Heart (3) (1) x (2)	Avg. Salary with 10 or more Yrs. of Service (4)
< 25	1	0.001%	0.000	-
25 to 29	21	0.001%	0.000	-
30 to 34	76	0.001%	0.001	75,383
35 to 39	95	0.001%	0.001	78,422
40 to 44	100	0.002%	0.002	83,768
45 to 49	89	0.005%	0.004	86,370
50 to 54	41	0.014%	0.006	91,131
55 to 59	23	0.032%	0.007	91,525
60 to 64	8	0.059%	0.005	97,672
65 to 69	-	0.105%	-	-
70 and up	1	0.197%	0.002	83,179
Total	455	0.006%	0.028	89,104

(1) Exhibit 5, Page 1
(2) Exhibit 8, Page 2
(4) Exhibit 5, Page 1

Montana Municipal Interlocal Authority
Estimated Annual Incidence of Cancer

Inactive Firefighters
Cancer Incidence Rates (Unadjusted for firefighter population)

Age	Bladder (1)	Brain (2)	Breast (3)	Colo-Rectal (4)	Esopha-geal (5)	Kidney (6)	Leuke-mia (7)	Lung (8)	Meso-thelioma (9)	Mye loma (10)	Non-Hodg. (11)	Total (12)
<50	0.003%	0.004%	0.013%	0.012%	0.001%	0.007%	0.005%	0.005%	0.000%	0.001%	0.008%	0.059%
50 to 54	0.033%	0.011%	0.047%	0.079%	0.011%	0.039%	0.020%	0.085%	0.001%	0.012%	0.034%	0.373%
55 to 59	0.033%	0.011%	0.047%	0.079%	0.011%	0.039%	0.020%	0.085%	0.001%	0.012%	0.034%	0.373%
60 to 64	0.033%	0.011%	0.047%	0.079%	0.011%	0.039%	0.020%	0.085%	0.001%	0.012%	0.034%	0.373%
65 to 69	0.127%	0.020%	0.080%	0.161%	0.029%	0.081%	0.057%	0.297%	0.006%	0.034%	0.082%	0.973%
70 to 74	0.127%	0.020%	0.080%	0.161%	0.029%	0.081%	0.057%	0.297%	0.006%	0.034%	0.082%	0.973%

Incidence Rates Based on Exhibit 8

Montana Municipal Interlocal Authority

# of Active Full-time Firefighters & Average Salary
Eligible for Presumption Based on Years of Service

Age	# of Full-time Firefighters					Average Salary				
	<========= Years of Service =========>					<========= Years of Service =========>				
	4 or more	5 or more	10 or more	12 or more	15 or more	4 or more	5 or more	10 or more	12 or more	15 or more
< 25	1	-	-	-	-	-	-	-	-	-
25 to 29	21	14	-	-	-	66,923	68,566	-	-	-
30 to 34	76	72	20	9	1	69,246	69,346	75,383	74,580	73,376
35 to 39	95	88	61	30	9	75,677	76,469	78,422	80,508	83,637
40 to 44	100	99	77	51	33	81,299	81,637	83,768	86,007	89,366
45 to 49	89	89	82	71	63	86,546	86,546	86,370	87,090	88,168
50 to 54	41	41	39	38	37	91,321	91,321	91,131	91,326	91,618
55 to 59	23	23	23	22	21	91,525	91,525	91,525	92,328	93,531
60 to 64	8	7	5	4	4	94,100	95,175	97,672	96,391	94,470
65 to 69	-	-	-	-	-	-	-	-	-	-
70 and up	1	1	1	1	1	83,179	83,179	83,179	83,179	83,179
Total	455	434	308	224	169	79,966	80,802	84,588	86,866	89,607

Based on Exhibit 5, Page 2 and Exhibit 5, Page 5

Montana Municipal Interlocal Authority
Reported by Bureau of Labor and Statistics

# of Active Full-time Firefighters
By Age and # of Years of Service

Age	<========== Years of Service ==========>												
	0	1	2	3 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 or more	Total
< 25	9	6	5	2	-	-	-	-	-	-	-	-	21
25 to 29	14	10	17	14	14	-	-	-	-	-	-	-	68
30 to 34	11	9	11	8	52	19	1	-	-	-	-	-	112
35 to 39	6	8	6	15	28	51	9	-	-	-	-	-	122
40 to 44	1	4	2	3	22	44	29	4	-	-	-	-	108
45 to 49	-	2	1	-	6	19	39	23	2	-	-	-	92
50 to 54	1	-	1	-	2	3	9	17	11	-	-	-	43
55 to 59	-	-	1	-	-	2	1	6	9	5	-	-	24
60 to 64	-	-	1	2	3	1	1	-	2	1	-	-	10
65 to 69	-	-	-	-	-	-	-	-	-	-	-	-	-
70 and up	-	-	-	-	-	-	1	-	-	-	-	-	1
Total	41	39	43	43	126	139	90	50	24	6	-	-	600

Total Based on Total MMIA Active Firefighters as of 2019
Distribution Based on FURS Exhibit 5, Page 3

Montana Municipal Interlocal Authority
Reported by Montana Unified Firefighter Reporting System

Percent of Active Full-time Firefighters
By Age and # of Years of Service

Age	<========== Years of Service ==========>												
	0	1	2	3 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 or more	Total
< 25	1.5%	0.9%	0.8%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%
25 to 29	2.3%	1.7%	2.7%	2.3%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.3%
30 to 34	1.8%	1.5%	1.8%	1.4%	8.7%	3.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	18.6%
35 to 39	0.9%	1.4%	0.9%	2.4%	4.6%	8.5%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	20.3%
40 to 44	0.2%	0.6%	0.3%	0.5%	3.7%	7.3%	4.9%	0.6%	0.0%	0.0%	0.0%	0.0%	18.0%
45 to 49	0.0%	0.3%	0.2%	0.0%	1.1%	3.2%	6.4%	3.8%	0.3%	0.0%	0.0%	0.0%	15.3%
50 to 54	0.2%	0.0%	0.2%	0.0%	0.3%	0.5%	1.5%	2.7%	1.8%	0.0%	0.0%	0.0%	7.2%
55 to 59	0.0%	0.0%	0.2%	0.0%	0.0%	0.3%	0.2%	1.1%	1.5%	0.8%	0.0%	0.0%	4.0%
60 to 64	0.0%	0.0%	0.2%	0.3%	0.5%	0.2%	0.2%	0.0%	0.3%	0.2%	0.0%	0.0%	1.7%
65 to 69	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
70 and up	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
Total	6.9%	6.4%	7.2%	7.2%	21.1%	23.2%	15.0%	8.2%	4.0%	0.9%	0.0%	0.0%	100.0%

Distribution Based on Exhibit 5, Page 4

Montana Municipal Interlocal Authority
Reported by Montana Unified Firefighter Reporting System (FURS)

# of Active Full-time Firefighters
By Age and # of Years of Service

Age	<========== Years of Service ==========>												
	0	1	2	3 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 or more	Total
< 25	10	6	5	2	0	0	0	0	0	0	0	0	23
25 to 29	15	11	18	15	15	0	0	0	0	0	0	0	74
30 to 34	12	10	12	9	57	21	1	0	0	0	0	0	122
35 to 39	6	9	6	16	30	56	10	0	0	0	0	0	133
40 to 44	1	4	2	3	24	48	32	4	0	0	0	0	118
45 to 49	0	2	1	0	7	21	42	25	2	0	0	0	100
50 to 54	1	0	1	0	2	3	10	18	12	0	0	0	47
55 to 59	0	0	1	0	0	2	1	7	10	5	0	0	26
60 to 64	0	0	1	2	3	1	1	0	2	1	0	0	11
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	0
70 and up	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	45	42	47	47	138	152	98	54	26	6	0	0	655

FURS State of Montana Actuarial Valuation as of 6/30/18: Table D-1, Page 44

Montana Municipal Interlocal Authority
Reported by Montana Unified Firefighter Reporting System (FURS)

Average Salary of Active Firefighters
By Age and # of Years of Service

Age	<========== Years of Service ==========>											
	0	1	2	3 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 or more	Total
< 25	40,494	55,124	64,380	67,555	0	0	0	0	0	0	0	0	51,856
25 to 29	46,616	54,886	54,862	63,638	68,566	0	0	0	0	0	0	0	57,751
30 to 34	53,340	57,926	62,700	67,486	67,021	75,477	73,376	0	0	0	0	0	66,047
35 to 39	50,945	52,595	73,772	66,198	72,171	77,487	83,637	0	0	0	0	0	72,343
40 to 44	68,666	50,430	62,317	56,515	74,181	79,569	88,864	93,338	0	0	0	0	79,502
45 to 49	0	73,898	48,064	0	88,811	80,452	89,025	86,320	93,361	0	0	0	85,908
50 to 54	48,320	0	80,539	0	95,483	84,509	87,877	89,269	98,272	0	0	0	90,175
55 to 59	0	0	113,220	0	0	68,007	134,935	89,677	89,233	99,390	0	0	92,353
60 to 64	0	0	78,797	85,500	91,012	110,482	92,675	0	93,300	98,605	0	0	91,927
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	n/a
70 and up	0	0	0	0	0	0	83,179	0	0	0	0	0	83,179
Total	48,154	55,634	62,760	65,889	71,593	78,507	88,592	88,258	94,035	99,259	n/a	n/a	74,582

FURS State of Montana Actuarial Valuation as of 6/30/18: Table D-1, Page 44

Montana Municipal Interlocal Authority
Estimated Annual Incidence of Cancer

Inactive Firefighters
Estimated Incidence Count (Unadjusted for firefighter population)

Age	Bladder (1)	Brain (2)	Breast (3)	Colo-Rectal (4)	Esopha-geal (5)	Kidney (6)	Leuke-mia (7)	Lung (8)	Meso-thelioma (9)	Mye loma (10)	Non-Hodg. (11)	Total (12)
<50	0.0005	0.0008	0.0025	0.0025	0.0002	0.0014	0.0010	0.0010	0.0000	0.0003	0.0016	0.0118
50 to 54	0.0142	0.0048	0.0206	0.0344	0.0050	0.0172	0.0089	0.0370	0.0005	0.0054	0.0147	0.1626
55 to 59	0.0223	0.0075	0.0324	0.0542	0.0079	0.0271	0.0140	0.0582	0.0008	0.0084	0.0231	0.2559
60 to 64	0.0183	0.0061	0.0265	0.0444	0.0065	0.0221	0.0115	0.0476	0.0006	0.0069	0.0189	0.2094
65 to 69	0.0267	0.0042	0.0167	0.0339	0.0060	0.0171	0.0119	0.0626	0.0012	0.0072	0.0173	0.2050
70 to 74	0.0059	0.0009	0.0037	0.0075	0.0013	0.0038	0.0026	0.0138	0.0003	0.0016	0.0038	0.0453
Total	0.0878	0.0244	0.1025	0.1769	0.0269	0.0887	0.0499	0.2203	0.0034	0.0298	0.0794	0.8900

Based on # of Eligible Inactive (Exhibit 6, Page 2) times incidence rates (Exhibit 4, Page 1

Montana Municipal Interlocal Authority
Estimated Annual Mortality from Heart/Lung Disease

Inactive Firefighters
Estimated Incidence Count (Unadjusted for firefighter population)

Age	Heart Disease (1)	Chronic Lower Respiratory Disease (2)	Total (1)
<50	0.0148	0.0010	0.0158
50 to 54	0.0558	0.0061	0.0619
55 to 59	0.1378	0.0216	0.1595
60 to 64	0.1655	0.0334	0.1989
65 to 69	0.0860	0.0222	0.1082
70 to 74	0.0283	0.0092	0.0375
75 to 79	0.0143	0.0047	0.0191
Total	0.5026	0.0982	0.6008

Based on # of Eligible Inactive (Exhibit 6, Page 2) times incidence rates (Exhibit 8, Page 2)

Montana Municipal Interlocal Authority
Reported by Montana Unified Firefighter Reporting System

# of Retired & Inactive Firefighters
By Age

Age	Service Retirees (1)	Disability Retirees (2)	Total Service and Disability (3) (1)+(2)	% Within 10 Years of Last Service (4)	Total Count Within 10 Year of Last Service (5) (3)x(4)
<50	12	8	20	100.0%	20
50 to 54	40	6	46	94.8%	44
55 to 59	74	4	78	88.0%	69
60 to 64	85	7	92	61.1%	56
65 to 69	74	13	87	24.2%	21
70 to 74	68	11	79	5.9%	5
75 to 79	55	3	58	2.6%	2
80 to 84	27	5	32	0.8%	0
85 to 89	12	4	16	0.2%	0
90 to up	6	1	7	0.0%	-
Total	453	62	515	3.7765762	216

(1),(2) FURS State of Montana Actuarial Valuation as of 6/30/18: Page 48
(4) Judgment: Based on Average Retirement age of 51 (per FURST Actuarial study, page 54)

Montana Municipal Interlocal Authority
Average Cost per Claim

		Medical	
(1)		5-Year Average Medical Cost per Permanent Total Claim	640,000
		Based on 2018 NCCI Statistical Bulletin	
		Indemnity	
		5-Year Average Indemnity Cost per Permanent Total Claim	295,000
(2)		Based on 2018 NCCI Statistical Bulletin	
		Adjustment for Firefighter Wages	
		Average Weekly Wage	
(3)		Montana Total (2016)	760
(4)		Firefighter contracting cancer	1,687
		2/3 Average Weekly Wage	
(5)	2/3x(3)	Montana Total (2016)	507
(6)	2/3x(4)	Firefighter contracting cancer	1,124
		Subject to Max PT Benefit of $768	
(7)	capped (5)	Montana Total (2016)	507
(8)	capped (6)	Firefighter contracting cancer	768
(9)	(8) / (7)	Ratio	1.52
(10)	(2)x(9)	Selected Indemnity Cost	448,000

Cancer Incidence Rates per 100,000 Population Exhibit 8
National Cancer Institute: Surveillance, Epidemiology, and End Results Program Page 1
Actual (not model) results

Cancer Site	Age<20	Age 20-49	Age 50-64	Age 65-74	Age 75+
Bladder/Urinary	-	2.53	32.52	126.59	258.19
Brain	3.22	4.02	10.93	20.15	25.05
Breast	-	12.51	47.21	79.50	76.12
Colorectal	0.32	12.37	78.98	161.00	257.55
Esophagus	-	0.94	11.49	28.70	36.96
Kidney	0.69	7.25	39.40	81.21	86.42
Leukemia	4.96	5.16	20.40	56.58	99.10
Lung	-	4.86	84.78	297.48	441.43
Mesothelioma	-	0.14	1.10	5.80	13.60
Myeloma	-	1.44	12.29	34.18	51.86
Non-Hodgkins Lymphoma	1.58	7.81	33.64	82.16	132.47

https://seer.cancer.gov/faststats/selections.php?#Output
Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
Blank ("-"): not displayed due to less than 16 cases.
Cancer sites include invasive cases only unless otherwise noted.
Incidence source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG).
Incidence per 100,000 (5-year average 2011-2015)
Gender Mix: Male: 83% Female: 17%

Heart & Lung Mortality Rates per 100,000 Population
CDC/NCHS, National Vital Statistics System, Mortality 2016
All Races, Gender-Weighted

Age	Heart Disease	Chronic Lower Respiratory Disease
20 to 24	3.56	0.65
25 to 29	6.44	0.67
30 to 34	12.43	1.00
35 to 39	22.91	1.25
40 to 44	42.03	2.30
45 to 49	74.03	4.79
50 to 54	127.98	13.93
55 to 59	200.73	31.52
60 to 64	294.50	59.47
65 to 69	408.58	105.30
70 to 74	608.92	197.42
75 to 79	947.32	312.78

https://www.cdc.gov/nchs/data/dvs/lcwk/lcwk1_hr_2016.pdf
Rates are per 100,000
Blank ("-"): not displayed due to less than 16 cases.
Gender Mix: Male: 83% Female: 17%